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ALASKA HIGHWAY PIPELINE INQUIRY

IN THE MATTER OF AN APPLICATION BY FOOTHILLS PIPE LINES
(YUKON) LTD. TO THE MINISTER OF INDIAN AFFAIRS AND
NORTHERN DEVELOPMENT FOR A GRANT OF THOSE INTERESTS IN
THOSE AREAS OF TERRITORIAL LANDS IN THE YUKON TERRITORY
AS MAY BE NECESSARY FOR THE CONSTRUCTION AND OPERATION
OF THE SAID NATURAL GAS PIPELINE AND THE WORKS AND
FACILITIES CONNECTED THEREWITH AND INCIDENTAL THERETO,

AND

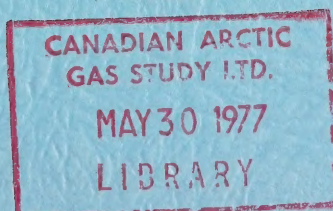
IN THE MATTER OF A BOARD OF INQUIRY ON THE SOCIO-ECONOMIC
ASPECTS OF AN ALASKA HIGHWAY GAS PIPELINE.

BEFORE THE BOARD

K.M. LYSYK, Esq., Q.C.	Chairman
WILLARD PHELPS, Esq.	Member
MRS. EDITH BOHMER	Member

PROCEEDINGS

VOLUME I

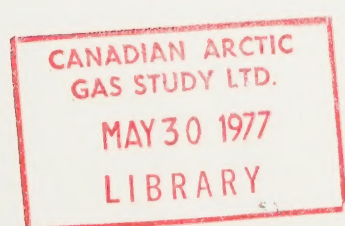


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APPEARANCES

Stephen Goudge, Esq.	Commission Counsel
Ian Roland, Esq.	
A. Hollingworth	Appearing for Foothills Pipe
R. Hudson	Lines (Yukon) Ltd.
J. Marshall, Esq.	Appearing for Canadian Arctic
D. Gibson, Esq.	Gas Pipe Line Limited
K. Taves, Esq.	.
D. Joe, Esq.	Appearing for Council for Yukon Indians
G. Ellis, Esq.	Appearing for Yukon Transport- ation Association
D. Morrison, Esq.	Appearing for the Whitehorse Chamber of Commerce
Ione Christensen	Appearing for the Association of Municipalities and the City of Whitehorse
Sid Horton, Esq.	Appearing for the Yukon
Al Wright, Esq.	Territorial Government
Hector McKenzie, Esq.	Appearing for the Yukon
Rob McCandless, Esq.	Conservation Society

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JOHN BURRELL
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Whitehorse, Y.T.

May 11th, 1977.

Upon commencing at 10:00 a.m.

MR. CHAIRMAN: I wish now to open our hearings on the Alaska Highway Pipeline proposal, and I will begin by introducing the members of the Board of Inquiry.

My name is Ken Lysyk, and my colleagues are Edith Bohmer and Willard Phelps, both of whom are Yukoners as indeed were their parents and grandparents. It is my good fortune to have as fellow members of the Board two individuals who bring with them, in addition to their abilities and experience, an intimate knowledge of the Yukon and its people.

We are conscious of the fact that we share a heavy responsibility.

Much has been heard in recent weeks about the competing proposals for construction of a gas pipeline running from the Arctic to the 49th parallel. It is not necessary to remind Canadians that the decision that must be taken by the federal government is one of extraordinary importance. So too is the ^{question of} timing of that decision. The Government of Canada has stated that it proposes to make a decision this August concerning which of the proposed pipeline routes through Canada, if any, that it is prepared to approved in principle.

1 This Inquiry was established to
2 assist the government in its deliberations; and we have
3 been directed to submit our report to the Minister of Indian
4 Affairs and Northern Development by August 1st.

5 We know that some will question this
6 timetable, and will say that the government ought not to
7 attempt to make its decision in principle so soon.
8 Specifically, the view will be expressed that the decision
9 should be postponed until more extensive studies are carried
10 out on the proposed Alaska Highway route than can be completed
11 by August.

12 Others will disagree. Pointing to
13 the fact that the United States Government proposes to make
14 its decision concerning a route for moving gas from Alaska to
15 the lower 48 states this fall, and that a failure on the
16 part of Canada to declare its intention before then may in
17 effect be taken as a decision against a Canadian route.
18 They will argue that any decision against a pipeline route
19 through Canada should not be made by default, but only by
20 conscious choice and on the basis of the best information that
21 can be made available to the Government in these next few
22 months.

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1 It is for the Government of Canada
2 to determine whether or not it will adhere to the time table
3 that it has set for itself. But given that timetable, the
4 pertinent question is not whether a report in greater depth
5 would be possible if ^{only} more time were available for its
6 preparation. The question really comes one of whether, prior
7 to making its decision, it is better for the government to
8 have some assessment of the social and economic implications
9 of the Alaska Highway pipeline proposal, albeit a preliminary
10 report, than it is for the government to have no report at
11 all.

12 It is in that perspective that the
13 members of this Board of Inquiry have addressed the question,
14 and have concluded that we can perform a useful function.

15 And if we are acutely conscious, as
16 we must be, of the constraints which the deadline imposes on
17 us, there are certain aspects of our mandate which make the
18 task somewhat more manageable than might appear at first
19 glance.

20 I referred a moment ago to the
21 preliminary nature of the socio-economic statement we are
22 directed to prepare. At the time of announcing this Inquiry,
23 the Minister made it clear that if the Alaska Highway
24 application does receive approval in principle, then the
25 Government will establish a further inquiry for the purpose
26 of producing a final socio-economic impact statement, and

1 to assist the Government in developing terms and conditions
2 for the construction and operation of the pipeline. Our
3 terms of reference direct us to advise the Minister on the
4 arrangements for such a further inquiry and, of course, we
5 will be pleased to entertain submissions on that subject.

6 No-one suggests that all the
7 relevant information can be assembled and research completed
8 by the time our own Board of Inquiry concludes its work.
9 Another thing we are directed by our terms of reference to
10 do is to identify areas in which additional information should
11 be provided by the proponent -- by Foothills -- and also to
12 identify areas in which further studies may be required, and
13 once again we welcome submissions concerning what our
14 report should contain on those subjects.

15 In brief, this Inquiry represents
16 the first stage of what is intended to be a two-stage
17 process, with the second stage commencing if and when
18 the Government of Canada makes a decision in principle to
19 approve the Alaska Highway route.

20 Our role is to provide the best
21 information and advice we can to assist in the first stage
22 of that decision-making process, and to advise upon the nature
23 and form of the second stage.

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20 We have settled upon a schedule for
21 hearings in almost every community in the Yukon, seventeen
22 in all. I should like to express our appreciation in
23 particular to the Yukon Territorial Government and to the
24 Council for Yukon Indians for giving priority to the
25 working out of a mutually acceptable schedule, and for the
26 steps they have already taken to assist in the work of

1 informing the communities of the pipeline proposal.

2 For the members of this Board of
3 Inquiry and its staff, the coming weeks are certain to be a
4 period of intensive, concentrated work. How useful our
5 report will be obviously depends very much on a continuation
6 of the kind of co-operation we have already received, and a
7 willingness on the part of all concerned to give a very
8 high priority to the work that must be done in this short
9 time span.

10 We are ready to assist those who wish
11 to appear before us in every way possible, including the
12 provision of financial support to parties who require it to
13 prepare and bring their submissions forward to us.

14 We are confident that the people of
15 the Yukon will recognize the responsibility, and respond to
16 the opportunity, to come forward and make their views known
17 to this Inquiry.

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20 As you said sir, we propose to
21 hold hearings in seventeen communities in Yukon. This of
22 course, includes Whitehorse where we will be holding our
23 more informal hearings, both in the city and the Indian
24 village and probably in Porter Creek. These hearings, as
25 I said, will be informal hearings with few, if any, lawyers
26 around to clutter up the process. This will hopefully,

1 permit the people of the communities to express their views
2 to your Board and to give you their concerns about the
3 project.

4 Our schedule for attending the
5 communities will be available from Miss Hutchinson and we will
6 be advertising our presence in the communities on the radio
7 and in the press.

8 We have a member of our staff,
9 Rob Herman, who is sitting at my far left who will be visiting
10 each community in advance to help make known when the Board
11 will be coming and to assist in describing the job of the
12 Board to the communities.

13 In addition, sir, we propose to have
14 more formal hearings here in Whitehorse. This is the
15 opening day of those formal hearings and here we propose to
16 present to you the more technical evidence relating to
17 socio-economic implications of the project that Foothills
18 Pipe Line has before you. That evidence will be lead by
19 Foothills and by other interest groups that have evidence
20 of that kind to offer to you. There will be full right
21 of cross examination to all participants in this process
22 here in Whitehorse and in an effort to ensure full participatio
23 of all companies, groups and individuals who may be interested
24 in the more formal type of hearings, I have endeavored to
25 contact those groups and individuals who have expressed
26 interests in other forums in this particular project and

1 in fact, I have met with a group of some of them yesterday
2 to discuss some of the matters that I will speak to you
3 about now.

4 Perhaps before I do that, I could
5 introduce them to you, Mr. Chairman and Members of the Board.

6 First of all, representing Foothills
7 Pipe Line (Yukon) Ltd., Alan Hóllingworth, sitting on my
8 right. Acting for the Council for Yukon Indians is David
9 Joe sitting just off my right shoulder. Representing the
10 Yukon Territorial Government is Sid Horton, who is at the
11 middle table in the rear.

12 Representing the Yukon Association
13 of Municipalities and the City of Whitehorse is Ione
14 Christensen. The Whitehorse Chamber of Commerce is
15 represented by David Morrison. The Yukon Transportation
16 Association is represented by George Ellis.

17 The Yukon Conservation Society is
18 represented today by Hector McKenzie.

19 Canadian Arctic Gas Pipeline Ltd
20 is represented by Jack Marshall and Ken Taves.

21 Another participant who is not yet
22 present, but will be participating as of tomorrow is a group
23 from Winnipeg headed by Carson Templeton.

24 Finally, sir, we will be participating
25 as your Commission Counsel. With me is Ian Roland, who is
26 seated on my left.

1 Now, Mr. Chairman, and Members of
2 the Board there may well be other groups, or individuals who
3 would like to participate in the formal hearing process that
4 I have not been able to contact. If there are such people
5 or groups. I would be very grateful if they would speak to
6 me at the break so that we can add them to our list and make
7 sure they are part of our process.

1 For the formal hearings here in
2 Whitehorse, the procedure that we propose to you are generally
3 speaking as follows: We propose to begin with evidence from
4 the applicant, the pipeline company, Foothills, commencing
5 in a few minutes. Each participant in the formal hearings
6 will be making opening remarks when they present their own
7 evidence. The cross-examination that I spoke about will be
8 permitted in the order of participants that I recited a few
9 minutes ago, and that cross-examination will of course follow
10 the presentation of evidence in chief in each case.

11 Following the completion of cross-
12 examination by the list of participants that I read out, if
13 others present wish to cross-examine the panel of witnesses
14 that appears before you, they'll be permitted to do so at
15 that time.

16 The schedule for our formal hearings
17 is basically this: We will be convening today; we'll be
18 sitting here in Whitehorse today, tomorrow, and Friday, and
19 Monday through Thursday of next week. We anticipate
20 returning to Whitehorse for further formal hearings after
21 a concerted intensive, and lengthy visit to the communities
22 outside Whitehorse, re-convening in Whitehorse on June 27th
23 sitting through that week, and July 4th and following if
24 needed.

25 We have attempted, Mr. Chairman
26 and members of the Board, to provide for some approximate

1 filing requirements. The time frame makes lengthy filing
2 requirements simply impractical, but what we have done to try
3 to facilitate the formal hearing process, is to ask Foothills
4 Pipelines to have their filings of evidence for this week
5 available today and I understand that that will in fact take
6 place. Other participants in the formal hearing process who
7 will be presenting evidence to you next week, we have asked
8 to file their submissions with us at our office in the Lynn
9 Building by the end of this week, if possible. When we
10 re-convene the formal hearings in June, in late June, we
11 anticipate that participants who will be appearing to give
12 evidence before you will be filing their evidence with us
13 a week in advance of their appearance.

14 Those are the rules, such as they
15 are, that we propose apply to the formal hearings in
16 Whitehorse.

17 The one other matter that I would
18 like to speak to is that we do have in our office in the
19 Lynn Building, a public viewing area containing what we hope
20 are all the relevant documents that apply to the proposal
21 that your Board will be considering. Those documents are,
22 of course, available for any interested members of the public
23 to examine, and indeed we'd be pleased to help with any
24 questions that may arise in connection with them. Our
25 office hours are the usual business hours, lengthened a
26 little because of the time frame we're working under.

MR. GOUDGE: I've been advised that we get a break shortly after Mr. Hollingworth begins in order to permit a multi-media slide camera to be in place.

1 Mr. Hollingworth?

2 MR. HOLLINGWORTH: Thank you, Mr.
3 Goudge. Mr. Chairman and members of the Board, I will be
4 accompanied in my legal duties for Foothills from time to time
5 by Mr. Ralph Hudson, who has other duties in Whitehorse today
6 who can't be here, and by Mr. Robert Mackie, who will be here.

7 MR. CHAIRMAN: Perhaps you wouldn't
8 mind taking that from the top.

9 MR. HOLLINGWORTH: I will, Mr.
10 Chairman.

11 Mr. Chairman and members of the
12 Board, I will be assisted from time to time in the legal
13 duties on behalf of Foothills Pipelines (Yukon) Ltd. by Mr.
14 Ralph Hudson, who has other duties in Whitehorse today
15 which prevent him being here, and by Mr. Robert Mackie who
16 will appear from time to time.

17 Looking around the hall and seeing
18 so many veterans of another Inquiry, which recently filed
19 a report, it seems appropriate indeed that we are meeting
20 in the Legion Hall.

21 We, of course, are gathered for a
22 new Inquiry with different terms of reference, considering
23 a different project, and as you pointed out sir, with a
24 different time frame.

25 We at Foothills welcome this
26 examination of the socio-economic considerations of our

1 proposed Alaska Highway Pipeline project. Our best wishes
2 for the task ahead go out to the Inquiry members, together
3 with our pledge to co-operate with the Inquiry, it's staff,
4 and indeed all the participants, in carrying out their
5 vital work.

6 Foothills Pipelines (Yukon) Ltd. is
7 through Foothills Pipelines Ltd., a subsidiary of the
8 Alberta Gas Trunkline Co. Ltd. and West Coast Transmission
9 Co. Ltd, both major gas transmission companies with a long
10 history of research in operations in northern pipelines.

11 Both sponsor companies/^{who}were involved
12 in earlier projects examining energy shipment from the North.
13 Specifically, the Mountain-Pacific project and the Gas Arctic
14 system. This latter system eventually merged into a
15 proposal which is known today as Arctic Gas. Alberta Gas
16 Trunkline thought better of it's involvement in the project
17 and opted out of it in September of 1974. But at the time
18 the Arctic Gas proposals was made, it made some sense indeed.
19 Several companies would pool their resources and carry out
20 research directed to, among other things, environmental and
21 socio-economic issues. This pooling resulted in the famous
22 One Hundred Million Dollar fund of Arctic Gas which is
23 sometimes -- and I've heard it referred to again lately, and
24 pointed to as giving Arctic Gas some sort of inside track
25 on northern pipeline research. Well perhaps several things
26 bear mentioning about that Hundred Million Dollar fund.

1 In the first place, the Alberta
2 Gas Trunkline Co., as a member of the Arctic Gas consortium,
3 until September of 1974 is entitled to all information
4 gathered by that consortium up to the date of the trunkline
5 leaving it.

6 In the second place, not all that
7 money was spent on environmental and socio-economic research,
8 far from it. That money was a pre-certification budget
9 which also included administrative and legal fees and research
10 on engineering aspects. Among the engineering aspects were
11 such projects as frost heave research, which had to go out
12 the window as it turned out to be totally futile.

13 Thirdly, Foothills, Trunkline, and
14 West Coast, have themselves, to date, spent \$38 Million
15 embarked in northern pipeline proposals, including research
16 on environmental and socio-economic situations along the
17 Alaska Highway.

18 Foothills Pipelines (Yukon) Ltd.
19 and an aluminum company has exclusive rights in this country
20 to use the name 'Alcan', has applied to the National Energy
21 Board and the Department of Indian and Northern Affairs for
22 the right to build a 48 inch pipeline along the Alaska Highway.
23 It has not applied for a route down the Klondike Highway or
24 down the Dempster Highway. It has, at the request of the
25 National Energy Board, conducted a study looking into the
26 engineering and economic factors involved with such routes.

1 I have a report which will be
2 filed with the Inquiry as an exhibit involving the study.

3 The application is for a route
4 from Alaska to British Columbia closely paralleling the
5 Alaska Highway at most places and for nothing more.

6 We understand that the Inquiry
7 plans to seek the views, nevertheless, of the inhabitants
8 of the cities and villages along the Klondike Highway and
9 Foothills has agreed to co-operate with the Inquiry by going
10 to those communities and explaining our pipeline project and
11 pipelining in general, in the hopes that this will assist the
12 residence when they present their views to you.

13 In preparing its application
14 Foothills was guided by and complied in full with the
15 requirements of the National Energy Board Act and its
16 Regulations. We would like to file the application of
17 Foothills with the Inquiry together with studies performed
18 by or for Foothills relating to socio-economic matters and
19 indeed environmental and engineering matters, sir, and I
20 would ask that that matter be taken up shortly following the
21 break.

22 Foothills continues to do some
23 reasearch on the effects of a pipeline as well as sponsoring
24 although, not in any way controlling the work of Mr. Carson
25 Templeton, to whom Mr.Goudge made reference earlier on.
26 We understand Mr. Templeton and his members will be here on

1 Monday to present their evidence.

2 In the event that this project were
3 to be certified many more requirements would have to be met
4 and further large expenditures would be required prior to
5 the construction.

6 Mr. Chairman, you rightly point
7 out that the preliminary nature of this Inquiry has been
8 set out in your Terms of Reference and we have tried
9 the fine line between presenting you with as complete
10 record as possible and maintaining the preliminary nature of
11 this Inquiry.

12 At the time of certification for
13 instance, the company could justify enormous expenses of
14 final engineering design which would then permit far more
15 site-specific studies with respect to the environment and
16 localized studies relating to social and economic factors.

17 We believeⁱⁿ the presentation of our
18 evidence we have managed to observe the preliminary nature
19 of the Inquiry's work without being overly simplistic about
20 some complex issues.

21 Further, we believe that we can
22 show the pipeline would have a positive effect on Yukon
23 society and the local economy. After an overview we will
24 proceed to a panel of six discussing broad social policies,
25 effects of communities, trends in government revenues and
26 expenditures, inflation, business and employment opportunities

1 in construction and operations and maintenance and the
2 response that companies experienced in northern operations.

3 Then the Nortran program which is
4 sponsored in part by Foothills, will be discussed by an
5 independent panel.

6 Later in the Inquiry we will present
7 more detailed evidence on immigration and Mr. Robert Blair,
8 the President of Foothills will appear to speak policy
9 including the vital question of native land claims.

10 Our overview is a short presentation,
11 accompanied by slides showing the construction and operation
12 and maintenance of a pipeline with a discussion of specific
13 issues arising from the construction and operation and maintenance
14 of the Alaska Highway pipeline.

15 Also outlined are some environmental
16 concerns which you, Mr. Chairman, rightly point out, relate to
17 socio-economic factors in many respects. We feel sir, that
18 this overview is necessary to provide the back-drop for
19 discussion of the issues which are before the Inquiry.

20 At this time sir, I might also say
21 that Foothills has assembled a series of models and photographs
22 depicting pipeline construction and showing a model of a
23 compressor station, of meter stations, of river crossings and
24 highway crossings, which we hope to set up at the public room
25 at the Travelodge. Perhaps later on today I could advise the
26 times at which time the public and indeed the Inquiry are

1 welcome to go and view this exhibit.

2 Sir, if we could have a short break
3 I would like to assemble the material necessary for the
4 overview presentation.

5 MR. CHAIRMAN: How long do you
6 think it will take?

7 MR. HOLLINGWORTH: I shouldn't
8 expect it to be more than ten minutes.

9 MR. CHAIRMAN: All right.

10 MR. MARSHALL: Mr. Chairman, my
11 name is Marshall, I represent Arctic Gas. I wonder if I
12 might give observation to matters which arise out of Mr.
13 Hollingworth's remarks, possibly you would like some
14 clarification?

15 Mr. Hollingworth referred to the
16 Dempster studies done by Foothills. These studies, as he
17 mentioned, have been submitted to the National Energy Board--
18 have been entered in those proceedings as Exhibit FHY-114-48.

19 As you are aware, sir, the Alaska
20 Highway project is advanced by its proponents as an express
21 line to carry U.S. origin gas only from Alaska through the
22 Yukon and south to United States markets.

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1 The foothills Maple Leaf scheme has been advanced as a means
2 proposed by Foothills for carriage of Canadian gas to southern
3 Canadian markets. As that project presently stands, it would
4 not affect the Yukon. However, Foothills has recently
5 completed and filed with the National Energy Board three
6 studies of 30-inch pipeline routes that are routed along
7 the Dempster Highway. Further, in testimony that is being
8 cross-examined upon in Ottawa at the N.E.B. this week, the
9 senior executives of Foothills and Westcoast have testified
10 that the Dempster pipeline route is an alternative to the
11 Maple Leaf route. I would like to quote brief passages
12 from the prepared evidence of Mr. Blair and Mr. Phillips
13 that speak to this topic, sir.

14 In Mr. Blair's evidence, upon which
15 he is being cross-examined today in Ottawa, he makes this
16 statement at page 4, in answer 4, "In the future possibility
17 that the route of the Maple Leaf line is not available
18 because of public opposition, or is not economi-
19 cally viable because of lower evaluation of gas supply
20 potential, the Foothills Yukon line could also be employed
21 to provide a connection of Mackenzie-Beaufort Canadian gas
22 by the alternative route of the Dempster Highway. This
23 adds to its attractiveness for Canada, I believe."
24 That is the end of the quotation for Mr. Blair. Mr.
25 Phillips of Westcoast also raises this matter in his testi-
26 mony, at page 3, he answered a question. I'll read first

1 the question, then his answer. The question was this:
2 "If this Board should deny your application insofar as it
3 is concerned with the Maple Leaf project, and approve your
4 application insofar as it concerns either the 42-inch system
5 proposed or the 48-inch proposed, but conditioned on
6 Foothills Yukon at some time in the future moving Mackenzie
7 Delta gas by a Dempster Highway pipeline, would Westcoast be
8 prepared to enter into a covenant agreeing to do so?" The
9 answer given by Mr. Phillips was as follows: "That would
10 depend on a number of factors - the reserves, deliverability,
11 forecasts of costs, markets, et cetera, but given certain
12 assurances, the answer would be yes, and Westcoast would be
13 prepared to participate on the same basis it has undertaken
14 for the Maple Leaf project, that is thirty per cent."

15 Mr. Chariman, members of the Board,
16 it is my submission that the statements of Messrs. Blair and
17 Phillips, just read, must lead one to conclude that a
18 Dempster Highway route is being held forth by Foothills as an
19 alternative to the Maple Leaf project in the Mackenzie Valley.
20 If that is so, sir, then what has now been put before you
21 as an express line system for carriage of United States'
22 origin gas may be modified enormously, and further, instead
23 of there being a proposal to build one pipeline in the Yukon,
24 it may be that what Foothills intends is to build two
25 pipelines in the Yukon. If that is to, sir, if that is the
26 intention of Foothills, then I suggest that this Inquiry

1 would only be doing half of its job, would only be examining
2 half of ~~the~~ total project if ^{it} did not look at both the Alaska
3 Highway project currently filed and the Dempster studies.

4 It is my submission, sir, that
5 Foothills ought to clarify its intentions concerning the
6 Dempster now in the most unequivocal terms. To say that
7 it has not applied for a Dempster route is simply not to
8 answer the question. The question is: what does Foothills
9 intend? I submit, sir, that this question must be
10 answered before the work of this Inquiry can effectively get
11 under way. Thank you, sir.

12 MR. CHAIRMAN: Mr. Hollingworth,
13 would like to speak to that at this point?

14 MR. HOLLINGWORTH: Yes sir, and
15 members of the Board, I have a number of comments to make
16 on that. In the first place, I think it would be appropriate
17 if Mr. Marshall would file the source of his quotes. I think
18 if he is suggesting that this is testimony which has been
19 given before the National Energy Board, then the appropriate
20 thing to do would be to file the appropriate transcript
21 of the National Energy Board, as an exhibit before this
22 Inquiry, before further discussion takes place.

23 In the second place, sir, I have not
24 had the opportunity to read this evidence, and I have not
25 had the benefit of listening to the testimony. Quite obvious-
26 ly, it appears that it hasn't been given. I find nothing

1 in what Mr. Marshall has said which could lead anyone to
2 conclude that there is anything more than a possibility,
3 a consideration of the possibility that a line might run
4 along the Dempster Highway. It has been studied in economic
5 and engineering terms, as I pointed out earlier in my
6 statement. It was done so at the request of the National
7 Energy Board, and it sounds, sir, that the responses are
8 given in that light as a response to the National Energy
9 Board.

10 I have pointed out before that there
11 is no application for a Dempster Highway connection. I have
12 pointed out before that there is no application for a Klondike
13 Highway pipeline. That, sir, is the fact at the moment, and
14 to my knowledge there is no intention to make any other
15 filing. This is an Inquiry to examine the Alaska Highway
16 proposal, and it is in this light that Foothills has
17 prepared evidence which deals with the Alaska Highway
18 proposal. I don't think that anything can be gained at the
19 moment by speculating on what possible applications might
20 be made in the future. We might reasonably ask Mr. Marshall,
21 in view of the recent setbacks that his client's project has
22 been suffering, whether they might indeed be considering
23 another project or another route.

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1 I don't think anything will be gained from that, sir.

2 Those are my submissions.

3 MR. CHAIRMAN: I might ask whether
4 other counsel have any submissions to make on this point at this time.

5 MR. JOE: My name is David Joe, and
6 I am representing the Council for Yukon Indians and in
7 speaking to the submission by Arctic Gas and the subsequent
8 rebuttal by Foothills, our concern of the Dempster possible
9 Pipeline is basically this: In evidence submitted by the
10 Indian people of the village of Old Crow in July of 1975 to
11 Justice Berger, the people of Old Crow expressed their
12 concern that they were opposed to any northern pipelines in
13 the northern Yukon primarily because of the socio-economic
14 impact that would be done to the people of Old Crow, as well
15 as to the essence of their mainstay there, which is the
16 Caribou Herd, the Porcupine Caribou Herd. The position of
17 the Council for Yukon Indians is that we would like to hear
18 the type of ramifications that the possibility of a Dempster
19 lateral, even if it is a possibility, we submit to this
20 hearing, that it is our position that evidence should be
21 brought forth from Foothills and it should be heard from
22 all of the communities along the Klondike Highway.

23 Even if it is a possibility, we
24 submit that this type of evidence should be heard.

25 MR. CHAIRMAN: Other counsel, Mr.
26 Goudge, would you like to speak to this?

1 MR. GOUDGE: Mr. Chairman, members
2 of the Board, just a few brief comments.

3 Let me say this, to begin with,
4 that as I understand Mr. Marshall's submission, he's asking
5 that Foothills define their position more clearly.

6 My concern is not to speak to that
7 so much as to speak to the general matter of what I propose,
8 subject to what the Board may rule to do in attempting to
9 examine the witnesses that are brought forward by all
10 parties. It seems to me, respectfully, that a legitimate
11 concern that has been raised in other forms, as Mr. Joe said,
12 and indeed that I'm sure will be raised before you, a
13 legitimate concern about this proposal is what it means for
14 both a Dempster lateral and what it means for a possible
15 Klondike alternative.

16 Given that those concerns appear
17 clearly to exist, seems to me, respectfully, that it's
18 clearly relevant to the task of your Board to get what
19 information you can from the witnesses that appear before
20 you as to the implications of those alternatives; as to
21 the implications of the Klondike route, as to the implications
22 of a Dempster lateral, so that the concerns that are expressed
23 about those two routes can be set against the evidence that
24 you may be able to glean from the witnesses that appear
25 before you.

26 While it doesn't respond directly

1 to Mr. Marshall's proposal or motion, my position would be
2 that I would intend and I want to make that clear at this
3 stage, to ask what questions I can of the witnesses that
4 appear before your Board to glean from them what evidence is
5 available as to both those alternatives, because it seems to
6 me that that evidence will speak directly to concerns that
7 have been expressed in other forms and that I am sure, sir,
8 when your Board visits the communities in that part of the
9 Yukon, will be expressed to you.

10 MR. CHAIRMAN: Thank you, Mr. Goudge.

11 I think I can indicate to Counsel
12 now, that this Board will be interested in receiving
13 information about the Klondike and Dempster routes.

14 We are prepared to entertain
15 submissions at a later stage as to how extensive that
16 information ought to be and what the record ought to contain.
17 But, if I may make that provisional ruling or observation
18 at this point, I'm sure we can deal with specifics as we
19 go along.

20 But, it is the case, Mr. Hollingworth
21 that we feel that however remote the possibilities might
22 be of the Dawson route, the Klondike option or the Dempster
23 lateral, that is something which is pertinent to the matters
24 which this Board should consider.

25 MR. HOLLINGWORTH: Sir, if I might
26 just comment on that; I hope that I made myself clear earlier.

1 Perhaps I didn't.

2 I am not suggesting that Foothills
3 would in any way withdraw co-operation when it came to
4 questions about the Dempster Highway or the Klondike Highway,
5 I'm merely pointing out, sir, that there is no application
6 for that, and the only study that has been performed on it
7 relates to the economics and engineering feasibility.

8 Now, we have that document and it's
9 going to be filed as an exhibit. I have no objections to
10 questions going to members of Foothills panels who appear
11 before you regarding other factors such as environmental
12 and socio-economic factors relating to those two routes.

13 I'm very much afraid sir, that
14 there'll be a distinct paucity of information because it
15 simply hasn't been studied.

16 That was the only point I wanted to
17 convey sir.

18 THE CHAIRMAN: Thank you, Mr.
19 Hollingworth, and perhaps now we'll take that ten minute
20 break.

21 (PROCEEDINGS ADJOURNED)

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1 (PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

2 THE CHAIRMAN: Ladies and gentlemen.

3 I understand we are ready to proceed with the presentation.

4 MR. HOLLINGWORTH: Mr. Chairman,
5 we have before you, Mr. Chairman and Members of the Panel,
6 a panel of four, starting on my right is Mr. Richard Littledale,
7 who is the vice-president of Operations and Maintenance of
8 Foothills Pipe Lines Ltd.

9 Next to him is Mr. Leo Bouckhout,
10 the Manager of Environmental Affairs of Foothills PipeLines.

11 The gentleman in the brown suit is
12 John Burrell the vice-president of Corporate Development of
13 Foothills. On my far left is Mr. Jack Saker, who is the
14 Construction Co-ordinator for Foothills Pipe Lines. They
15 are here to speak to the overview which I described to you
16 earlier.

17 RICHARD LITTEDALE: SWORN

18 LEO BOUCKHOUT: SWORN

19 JOHN BURRELL: SWORN

20 JACK SAKER: SWORN

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22 DIRECT EXAMINATION BY MR. HOLLINGWORTH:

23 MR. HOLLINGWORTH: Mr. Burrell?

24 MR. BURRELL: In making this
25 presentation, of course, we will be using slides to help
26 more explain clearly what we are doing.

1 Foothills Pipe Line (Yukon) Ltd is
2 a wholly owned subsidiary of Foothills Pipe Lines Ltd, both
3 federally incorporated companies. The parent company is the
4 sponsor of the Maple Leaf Project, which is a project to bring
5 natural gas from the Mackenzie Delta to market areas in
6 southern Canada.

7 Foothills Pipe Lines Ltd. is Canadian
8 owned by two of the largest gas transmission companies in
9 Canada, the Alberta Gas Trunk Lines Ltd and Westcoast
10 Transmission Company Limited.

11 Alberta Gas Trunk Line owns seventy
12 per cent of Foothills and Westcoast Transmission owns the
13 balance, thirty per cent.

14 For the sake of convenience throughout
15 the evidence we will refer to Foothills Pipe Lines (Yukon)
16 Ltd, as Foothills unless context requires a more precise
17 distinction.

18 The costs of the Yukon project are
19 being shared equally by Westcoast and Albert Gas Trunk Line.

20 Westcoast Transmission Company
21 Limited, Westcoast, initiated construction in 1956 of a system
22 to transport gas from northern British Columbia to the southern
23 part of the province and the northwestern United States.

24 Westcoast also obtains gas supplies
25 in the province of Alberta.

26 Since its initial construction the

1 Westcoast system has continually expanded and advanced
2 northward so that the northern tip of its system is now in
3 the Northwest Territories with a very small section in the
4 Yukon. Incidentally, wthi is the only natural gas transmission
5 line in Canada which is north of the 60th parallel.

6 The Westcoast system is two thousand
7 three hundred and sixty miles in length and the average daily
8 volume of gas transported is nine hundred and seventy-seven
9 million cubic feet.

10 The Alberta Gas Trunk Line Company
11 Limited, AGTL, gathers gas in the province of Alberta and
12 ships it to the borders of that province where it is connected
13 to other pipeline systems for shipment to eastern Canada,
14 British Columbia and the United States.

15 The AGTL system started in 1957
16 and like Westcoast, has continued to expand, particulary
17 northward until at the present time the system is five
18 thousand four hundred and thirteen miles in length, with an
19 average daily volume of gas carried of four thousand nine
20 hundred and ninety-four Mmcf.

21 We have shown this slide to give the
22 Inquiry an indication of the amount of gas which has been
23 proven north of the 60th parallel. The clear, of course,
24 are unconnected reserves and the coloured or the filled in
25 circles represent connected proven reserves and the run off of
26 prime interest in this inquiry would be the 26 trillion, shown

1 Littledale, Bouckhout, Burrell, Saker

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3 as the unconnected proven reserves in Alaska and Prudhoe Bay,
4 and of course, the five point six, which is unconnected in the
5 MacKenzie Delta area.

6 Of course, the volumes are also shown
7 in Southern Canada and also for the Artic islands.

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1 I mentioned that the trunkline
2 carried almost 5,000 Mmcf's a day in order to put this
3 amount of gas into perspective, it should be pointed out that
4 the average Canadian home consumes approximately 200 m.c.f.
5 per year for heating purposes.

6 The extensive experience of the
7 sponsors, Westcoast and Trunk Line has been of tremendous
8 assistance to Foothills in making up a staff and assisting
9 in the work necessary to advance this project.

10 The Alaska Highway Pipeline
11 Project is a proposal for a 48-inch pipeline through Alaska
12 and Yukon to southern Canada and the United States resulted
13 from an evaluation of a series of proposals to ship gas
14 from the giant Prudhoe Bay field on the North slope of
15 Alaska to the lower 48 of the United States. Believing
16 that the two existing proposals were seriously deficient
17 in several respects, Foothills and its sponsors joined with
18 Northwest Pipe Line Company of Salt Lake City, Utah, to
19 advance a pipeline system to transport Alaska gas to the
20 lower 48 via the so-called Fairbanks-Alaska corridor.
21 Originally a proposal for a 42-inch pipeline tying in
22 with expansion of existing pipeline systems through Alberta
23 and British Columbia, the project has been modified into a
24 48-inch express pipeline. The gas will proceed south from
25 the North slope of Alaska, as has been shown on the map,
26 at Prudhoe Bay through the Alcan Pipe Line Company system

1 to the Alaska-Yukon border, thence into the Canadian owned
2 and operated Foothills system through Yukon and from there
3 south through British Columbia, Alberta and Saskatchewan.
4 Gas removed in Yukon for use by Yukon communities will be
5 replaced in Alberta by gas containing the equivalent heating
6 value. The system will tie in at the 49th parallel with
7 systems in the United States which will pick up the gas and
8 carry it to points where it is required to alleviate the
9 critical natural gas shortage being experienced there.

10 The system is an overland one as
11 unanimously favoured by the recent decision of the Federal
12 Power Commission of the United States of America rendered
13 on May 1st, 1977.

14 The length of the proposed system
15 north of the 49th parallel is 2,754 miles of which 732
16 miles are in Alaska and 513 miles are in Yukon. The line,
17 as stated, will be 48-inch in diameter for most of the
18 distance and operating at a maximum pressure of 1,260 pounds
19 per square inch. Under the present construction schedule,
20 initial throughput of the system will be reached on
21 October 1st, 1981 at a volume of 1.6 bcf per day rising to
22 2.4 bcf per day on January 1, 1983. The ultimate throughput
23 with additional compression for this system is 3.4 bcf per
24 day.

25 Construction of the pipeline would
26 commence with two sections or spreads totalling about 200

1 miles in the summer of 1979, with the balance of construction
2 in 1980 and 1981.

3 The cost of the Yukon portion of
4 the system is \$1.24 billion. The total cost within Canada
5 is \$3.56 billion and the total for the project is \$7.03 billion.
6 All figures are in escalated dollars and represent the
7 amounts comparable to the initial throughput of the system.

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1 Mr. Saker now will continue and describe the construction of
2 the system.

3 MR. SAKER: First of all, as a
4 construction man, I am not a public speaker, so I'll be
5 reading from some of the text that we have prepared here
6 and you'll forgive me if I stray a bit from what is prepared
7 and what I know to be as a construction man.

8 We have shown you here to begin
9 with the clearing and grading of the right of way on a
10 typical prairie pipeline job and if I could go on through
11 this, I will not be referring specifically to the pipeline
12 work we've been doing here but for pipeline generally.
13 I would appreciate that if you would take that into
14 consideration.

15 Once we have chosen the route,
16 the final refinement will be done with the assistance of
17 orthophoto mosaics. This will reduce the probability of
18 changes being made in the field. The location survey
19 for a pipeline consists through the heavy timber of a
20 cutline about six feet in width. Just wide enough for our
21 surveyors to run the centre line of the right-of-way.

22 The entire right-of-way and
23 construction zone up to about 120 feet in width will be
24 cleared. The merchantable timber will be stacked and
25 subsequently removed. While the other timber will be
26 burned, and in southern areas this burning is done on a

1 burning sled. It has two purposes, it will reduce the
2 damage to permafrost areas and also controls the burning
3 to a very confined area.

4 When we are doing the grading and
5 run into some rock, it is either ripped with a dozer, or if
6 necessary, it's drilled and blasted to be removed. The
7 method of excavation depends very much on the soil conditions
8 determined by our geotechnical investigations. In most areas,
9 a ditching machine is used to produce a ditch of uniform
10 width and depth. Areas of large boulders require use of
11 a backhoe. While solid rock requires the use of blasting
12 as I specifically mentioned. The bottom of the ditch is
13 contoured to provide support for the pipe and bedding is
14 placed along certain portions of the ditch bottom to
15 provide a smooth base for the pipe.

16 The next step is handling and
17 stringing which entails moving pipe and other material from
18 stock pile sites to the area required on the right-of-way.
19 The pipe is strung along the ditch ready to be lined up
20 and welded. In order to follow the natural contours of
21 the land, bending of the pipe is necessary at certain points.
22 This is then done by an engineering crew. This is a
23 bending machine here, the pipe is put in and bent. This is
24 done to the cold pipe as you can see.

25 Each length or joint of pipe, as
26 we call it, is then lined up and welded. At this stage we

1 are preparing the bevelling. Here is the line-up plant for
2 bringing in the next section of pipeline, that is in
3 preparation for, in this case, an automatic welder to be
4 supplied.

5 Sometimes the pipe is welded in
6 the yard and we call it double jointing and it's done for
7 convenience out of the right of way, reducing the number of
8 welds required there. This welding is done under very
9 strict specifications and then it is X-rayed by another
10 follow-up crew. This is the second pass on the pipe, the
11 fill-up pass where the cap will come in later, filling this
12 gap here.

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1 The pipe is then in long continuous
2 sections, and it is almost ready for lowering in. It is
3 first coated and then wrapped with tape to prevent corrosion
4 due to moisture and other elements. This is the automatic
5 set up and these are the automatic welders to, in all
6 welding, whether it be done by hand or automatic welding is
7 very vital factor. This again is a tent over another
8 automatic welding set up in the North, as you can see.

9 These are one of the long
10 continuous sections being prepared for heating here, or
11 heating torch for the welder to come in and do his welding.

12 These are people viewing the
13 X-rays that have just taking place. This isn't a normal
14 practice here, this is of visiting dignitaries and the boys
15 decided to show them what they can look for when they see
16 a weld X-rayed.

17 We have a ditcher here ditching
18 the right-of-way, again it's a prairie scene. We anticipate
19 using the ditching a great deal on the Foothills Pipeline
20 right-of-way because it is not, in our opinion, that difficult
21 a terrain that we have chosen. This is a picture of the
22 ditch on a very severe downhill grade to show you what a
23 ditcher can do. This is at the bottom there.

24 This is the tape and wrap machine.
25 The rusted pipe and behind the coated pipe are steel
26 brushes in here that remove all the rust and the -- clean

1 up the weld as it goes through and you can see the
2 finished line just behind the tape and wrapping machine.

3 Again another view of the tape and
4 wrap machine showing the pipe ahead that has not been
5 cleaned, and again a better view of what is done to it after
6 it passes through this machine. This again is your
7 tape-wrapping machine after it has just gone over the black
8 tar you saw of the previous pipe.

9 MR. HOLLINGWORTH: Mr. Saker,
10 could you speak up a little please.

11 MR. SAKER: At this point, there
12 has been a section of pipe welded and you do this taping
13 and tarring by hand and what the people are doing under the
14 pipe is known as granny ragging.

15 This is a holiday detector that
16 goes over the tape after it has been applied to the pipe,
17 and it will detect minor holes that are found in the tape
18 and there will be another crew come along and repair these
19 minute holes that are found. This is that crew that found
20 a holiday or a small tear in the wrapping, and are
21 repairing it. This is the dope crew.

22 These are the lowering-in tractors,
23 and you can see what we mean by the right-of-way, because
24 they leap frog around one another and pick up a piece of pipe
25 here and then lower it in.

26 This is another shot of the

1 lowering in process, and still again more side boom tractors
2 lowering a long section of pipe into the ditch.

3 Again showing how the pipe is
4 snaked into the ditch, and the side boom tractors will leap
5 frog ahead of one another and lower it in.

6 This is a block valve tieing in to
7 a compressor station, and a tee on the main line going into
8 a compressor station.

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1 Littledale, Bouckhout, Burrell, Saker
2 In Chief

3 If I may just revert to my text here,
4 this is back-filling the pipeline. The installation
5 of river crossings calls for a very different technique
6 for pipeline construction teams. Smaller stream crossings are
7 carried out as part of the regular pipeline installation, but
8 the large rivers may require special equipment and, indeed, a
9 special design.

10 In this case, a seperate crew is
11 usually brought in to do the river crossings. The pipe is
12 welded together on one side of the river in a length sufficient
13 to cross it, then pulled across by a winch. The ditch is
14 excavated just ahead of placing the pipe then we float it across
15 with the use of floats, pull the floats off and the pipe sinks
16 into the ditch we have dug.

17 The pipeline ditch, under the river,
18 is generally deeper than elsewhere in the right-of-way, to get
19 below the maximum scour determined by hydrological studies.

20 With the completed pipe in the ground,
21 the pipe is then hydrostatically tested by filling it with
22 water and applying a pressure equal to 125 per cent of the
23 operating pressure of the line. This pressure is maintained
24 for 24 hours.

25 The pipe is also checked for roundness
26 and cleared of any foreign debris by pipeline scrapers, known

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2 In Chief

3 in the industry as "pigs", which travel the inside of the
4 pipe.

5 Clean up and restoration of the pipe-
6 line right-of-way follows. Quite apart from the aesthetics
7 involved, it is obviously in a pipeline company's best inter-
8 est to have the land revert to its natural contours and
9 vegetation as soon as possible. Revegetation, to be under-
10 taken shortly after clean up, greatly assists in preventing
11 erosion and possible exposure of the pipe.

12 Compressor stations are required at
13 calculated distances in order to compress the gas and force
14 it on down the line. In the case of Foothills' line, these
15 compressor stations will be an average of 65 miles apart. The
16 placement of these compressor stations is a critical factor in
17 determining how much gas can be shipped through the line.

18 It is not expected that construction
19 on this project will be materially different from that of any
20 Canadian pipeline project, particularly lines built by Alberta
21 Gas Trunk Line and Westcoast in northern Alberta, British
22 Columbia, the Yukon and the Northwest Territories. Normal
23 pipeline procedures can be expected to handle virtually every
24 contingency which we think might arise.

25 One factor peculiar to the North is
26 permafrost, a soil condition which poses potential problems

1 Littledale, Bouckhout, Burrell, Saker

2 In Chief

3 relative to a warm gas pipeline. The significance of concern
4 relates to the kind of permafrost; that is, whether it is of
5 high or low ice content. The melting of low ice content perma-
6 frost soil would not generally cause significant subsidence -

7 but the opposite may be true in the high ice con-
8 tent areas. The first 100 miles of the Foothills Pipe Line
9 routing within the Yukon is within a zone of wide spread dis-
10 continuous permafrost. Field drilling investigations in this
11 section shows that deep deposits of ice, high content soil
12 will occur only in the first 5 to 10 miles of the alignment.
13 In this section of the pipeline, which must be operated in a
14 chilled condition, the gas is below zero degrees Centigrade.
15 The balance of this 100 miles could be operated either warm or
16 chilled. For our system, we have chosen to operate "chilled"
17 to the first compressor station, which is about Mile 40.
18 Downstream of this station the gas flows "warm".

1 More detailed geotechnical studies
2 will provide specific information on soil conditions which
3 will allow production of the appropriate final design
4 measures.

5 Camp locations for the project are
6 shown on the alignment sheets which we have filed as part
7 of the application and are expected to be shown on the
8 following mileages: We have MP - 30 from the Alaska border;
9 MP - 90; MP - 162; MP - 206; MP - 361; and MP - 462.

10 The construction plan calls for
11 each camp to have an average manpower of 750. It will be
12 a self-contained unit made up largely of portable trailers
13 but providing accommodation, dining facilities and
14 recreational facilities. Steps have been taken to avoid
15 unnecessary environmental damage. Such steps include
16 sewage treatment, programs to avoid animal-man interaction
17 and location of camps in non-sensitive areas.

18 Workers from the south as required,
19 will be transported in and out of the Yukon by air. Materials
20 will be brought in by truck from Fort Nelson, Haines and
21 over the White Pass and Yukon Railway system. A detailed
22 logistics scheme has been devised and filed with the
23 Commission. The number of trucks will not be sufficiently
24 great to cause problems on the Alaska Highway, either
25 to other travellers, or to the Highway itself. The same
26 holds true for the Haines Highway.

1 We have earlier mentioned that
2 construction is planned to start in the summer of 1979 and
3 conclude in the winter of 1981 with an in-service date
4 being set as October 1st, 1981. This schedule includes
5 the construction of three compressor stations necessary
6 to ship the required quantities of gas. Four more
7 compressor stations would be necessary to ship a volume of
8 2.4 mcf a day. The first sections slated for construction
9 are numbers 4 and 6, number 4 is Mile 111 to 216; and
10 number 6 at Mile 321 to 415. Here's Whitehorse.

11 These are followed by two winter
12 sections in 1980 (numbers 2 and 3). It is expected that
13 winter time construction will have a far lower productivity
14 and the winter spreads are called upon to build only about
15 40 miles each, as opposed to an average of about 100 miles
16 for the summer spreads. Construction continues on
17 sections 5 and 7 in the summer of 1980 (number 5 and number 7)
18 with the final 30 miles, section 1, slated for the winter of 1980
19 1981. All three initial compressor stations will be built
20 during the 1980/81 season.

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1 MR. BURRELL: Mr. Bouckhout will
2 now discuss the environmental considerations with the
3 project.

4 MR. BOUCKHOUT: Any civil construction
5 project has the potential of causing adverse effects on the
6 environment, and pipelines are certainly no exception. The
7 significant possibilities in pipelining arise particularly
8 during the construction of the line, while the effects of the
9 operations and maintenance phase subsequent to construction
10 are generally less significant.

11 Issues which have to be addressed
12 include maintenance of drainage, slope stability,
13 preservation of wildlife populations, preservation of
14 archaeological sites and potential conflicts with present
15 and potential future land uses.

16 Every effort is made to maintain
17 natural drainage patterns and to stabilize slopes so that
18 erosion is kept to a minimum. Proper grading after the
19 pipe has been placed in the ditch, along with revegetation
20 and other stabilizing procedures, go a long way to meeting
21 the concern. These procedures are detailed on a site-
22 specific basis once a right-of-way has been selected and
23 cleared.

24 In the case of fish, preservation
25 of populations is ensured by taking care to minimize
26 siltation, crossing streams and rivers at a location which

You see in front of you a slide of the Pickhandle Lake complex. This is one area in which Foothills is already adopted a realignment in order to avoid the lake complex, which is reputed to be a quite important aquatic habitat both for moose, waterfowl, and so on. The relocation was also done because of aesthetic considerations relative to the Highway and relative to a compressor station location which was in it's immediate vicinity.

Alleviating impacts on land use, recreation and archaeological sites is primarily a function of location of the pipeline system, although archaeological site salvage and land rehabilitation constitute other means of dealing with impacts in this realm.

Foothills is taking all the above factors into account in setting its route and is conducting a comprehensive field study program of the area through which the pipeline will pass in order to determine the need for and extent of necessary protection measures and relocation of the present route. That's quite an important

1 point. I'm sure most of you have seen the location of the
2 route on the map, you must appreciate that this route is
3 not cast in steel, that it is still flexible and therefore
4 can be altered, depending upon the information which is
5 gathered both for managerring, geotechnical, environmental,
6 socio-economic points of view.

7 These studies will provide site-
8 specific information for detailed project planning.

9 Of particular concern on the Foothills
10 route in Yukon are ungulates such as Dall sheep, caribou
11 and moose, raptors such as falcons and eagles, waterfowl
12 and fish. Areas of specific concern, as some examples,
13 include the Kluane area, with it's population of Dall sheep,
14 the proximity of the national park, steep slopes and a tight
15 space within which to run the line. You see here a slide
16 at the south end of Kluane Lake which indicates the tight
17 area of which I have been speaking of. At the bottom of
18 the slide; just above the water line there is the alignment
19 of the Alaska Highway.

20 The Whitehorse area is another
21 concern because of potential conflicts with recreational
22 areas, other land use and with sheep habitat in the Ibex Pass.

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1 Foothills is con-
2 fident that the Alaska Highway Pipeline Project is environ-
3 mentally feasible. Historical precedent can be found in the
4 construction programs of both Westcoast and AGTL in northern
5 British Columbia and Alberta. We do not presume to have all
6 the answers to the various environmental concerns at this
7 time. With a coordinated effort involving Foothills, relevant
8 government agencies and the general public, we are convinced
9 that the environmental concerns posed by this project can be
10 mitigated.

11 MR. BURRELL: Now, for the operating
12 and maintenance aspects of the project, Mr. Littledale will
13 address those.

14 MR. LITTLEDALE: I'll give you first
15 a brief summary of the operations and maintenance, and then,
16 just explain very briefly and quickly what the slides are.
17 They are general in nature and could apply anywhere. The
18 operations and maintenance of a pipeline involves a number of
19 important functions, chief of which are maintaining the
20 integrity of the line and right-of-way and carrying out
21 regular inspections of the above-ground facilities, princi-
22 pally, compressor stations. The line is inspected periodically
23 by overflights by aircraft. Areas requiring attention can
24 be reached by conventional ground vehicles where road access
25 permits, by over-land vehicles such as low pressure ground
26 vehicles or by aircraft.

1 Except for initial break-in period,
2 the compressor stations will be operated either semi-attended
3 or unattended. Regular visits to the station will be made for
4 checks and maintenance.

5 Area offices, material supply depots
6 and maintenance centers are located at intervals along the
7 pipeline. Additionally, a gas control centre is required to
8 monitor operations of the line and will be manned 24 hours
9 a day.

10 In the case of the proposed Foothills
11 line, a gas control center would be located in the City of
12 Whitehorse which would also be the operations head office and
13 the location of a technical maintenance centre and a material
14 supply depot. Area offices would be maintained at Beaver
15 Creek, Haines Junction, Teslin and Watson Lake. These sites
16 are chosen for several reasons: they provide segmentation
17 of the system into a reasonable distribution, reasonable
18 travel distances and adequate access to the pipeline and its
19 facilities. Further, the sites provide a certain level of
20 employee amenities, transportation and communications.

21 We have previously noted the locations
22 of the compressor stations.

23 Routine maintenance of any right-of-
24 way includes checking and repairing unstable slopes which may
25 develop on or close to the right-of-way, checking on the flow
26 of surface water across or down the ditch line, ensuring that

1 revegetation is proceeding as quickly as possible, applying
2 subsequent seeding if necessary, maintaining weed and
3 vegetation control, maintaining access roads, ensuring that
4 cathodic protection is being maintained and checking the
5 integrity of river crossings. Right-of-way maintenance also
6 extends to emergency situations such as fires on or near
7 the right-of-way or repairing a break in the pipeline.
8 Foothills will follow these practices which are general to the
9 natural gas transmission industry.

10 The Nortran program, of which you
11 will hear more in the panels following this one, has con-
12 centrated on training/^{people}for the employment opportunities
13 which will arise in the operations and maintenance phase on
14 the basis that this is work of a permanent nature whereas
15 construction work is short-lived. The total personnel requi-
16 red in the Yukon will be approximately 200. Later panels
17 will deal with the types of positions to be filled as well as
18 the specific areas in which the manpower will be required.
19 They will also deal with the employee's support facilities
20 which will be a necessary part of the operation.

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1 This slide illustrates the line from
2 the U.S. border at Beaver Creek to Mile 512.6, near Watson
3 Lake, and the Foothills line is shown in red just running
4 along the southern end of the Yukon.

5 This is a typical type of service
6 centre building for the houses, both administrative
7 offices and work shop, some work shop facilities. It's
8 really just a type of a building.

9 This is showing the type of a
10 control console and communications centre in one of these
11 buildings.

12 This is just a standard communications
13 tower, I believe you can see these along the Alaska Highway
14 stretching right through from B. C., right up through the
15 Yukon and into Alaska.

16 This is another typical type of
17 service centre building that I've more or less, that would
18 probably be built in Whitehorse if Foothills built the line,
19 with this another view of it, you know, part office, part
20 workshop kind of complex.

21 This is a type of fixed-wing
22 aircraft that we would use for surveying the pipeline. It's
23 just an aircraft and we'd also use helicopters, nothing
24 very new about that.

25 This is just showing a strip of
26 countryside through which the pipeline has gone and

1 vegetation has taken over, and it's sort of blended in now
2 and you can't see the scars. That's a typical right-of-way
3 after vegetation again has taken over.

4 This is a highway crossing of a
5 pipeline, showing the milepost of the pipeline plus the
6 vents on the crossing. The crossing, in this case, is
7 encased and you have the casing vented and you also have
8 signs at the crossing saying 'Danger - High Pressure Gas
9 Pipeline Crossing'. It's quite a standard sort of
10 installation.

11 This is a river crossing showing
12 the right-of-way as it comes up to the banks of the river
13 on one side, and as you can see it looks like a sort of a
14 big meadow there.

15 This is an access road built down
16 the right-of-way, providing access to a compressor station.
17 This was done this way to avoid any sort of further cuts
18 through the trees or destruction of timber and we just
19 built an access road down the right-of-way.

20 This is a typical compressor
21 station complex. Another closer view of a compressor station
22 complex where there's the prime buildings - the auxiliary
23 buildings, piping, exhausts from the units, you can see
24 them - two units in this case.

25 This is a gentleman working in a
26 control room, and this is again a gentleman working on an

1 enunciator panel. These are panels that are enunciating the
2 condition of the unit, and should you have an unusual
3 condition, the panel or a function lights up and the fellow
4 says -- it says low lube oil, or high lube oil temperature
5 or indicates to him what the problem is and we just show
6 a technician working behind one of these panels here doing
7 some repair and checks. The graphic display panel and gas
8 control centre, and two people operating it there.

9 This is a meter station located out
10 in some farmland. The next view is another one of the
11 same station where the meter runs shown as they come in and
12 out, where the metering equipment in the buildings.

13 I believe that is it.
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1 MR. BURRELL: As was mentioned
2 earlier, it was not out intention in this overview panel to
3 deal with the local socio-economic factors in any detail.
4 These matters have been left to later panels.

5 Some considerations on a national
6 scale, however, were addressed by Foothills in appearances
7 before the National Energy Board. One of the items spoken
8 to, which bears mentioning here, is the Canadian content of
9 the project.

10 Both the labour and materials
11 content will be highly Canadian; in our estimate over 85 per
12 cent. The project will thus provide substantial spin-off
13 effects, especially in direct manufacturing. The project
14 will use a high degree of Canadian technology.

15 At present, all design work is
16 being done by Foothills staff or by Canadian consultants
17 retained by Foothills. It is Foothills intention to maintain
18 this practice so as to design, construct and operate a
19 project having the highest Canadian content possible.

20 Local socio-economic matters which
21 we intend to address in later panels are:

22 a) The overall objective of the
23 Foothills Socio-Economic Program and how it proposes to
24 accomplish this objective.

25 b) A community liaison program.

26 c) The supply of natural gas to

1 several Yukon communities,

2 d) Policies and objectives as
3 they relate to the provision of opportunities for Yukon
4 businesses,

5 e) The overall employment policies
6 of Foothills,

7 f) Social policies of the Company
8 and the potential social impact on Yukon arising from the
9 proposed Foothills project,

10 g) Construction phase manpower
11 requirements, hiring procedures and special agreements,

12 h) Union jurisdiction,

13 i) Operation and maintenance
14 of employment opportunities,

15 j) Operation and maintenance
16 policies and procedures,

17 k) The availability of operation
18 and maintenance training positions with Westcoast Transmission
19 Company Limited and The Alberta Gas Trunk Line Company Limited,

20 l) The experiences of both
21 Westcoast Transmission Company Limited and The Alberta Gas
22 Trunk Line Company Limited regarding the use of local
23 businesses, local hire and the effect with which pipeline
24 has had on nearby communities,

25 m) Inflationary trends arising from
26 the project,

1 n) Government revenue and
2 expenditures,

3 o) Nortran Training Program,

4 p) Population forecast, spin-off
5 effects and immigration predictions.

6 In addition, Mr. Robert Blair,
7 President of Foothills Pipe Lines (Yukon) Ltd., will appear
8 before this Inquiry to speak to matters of a policy nature.

9 This completes the overview
10 presentation by this panel.

11 MR. HOLLINGWORTH: Thank you Mr.
12 Burrell.

13 Mr. Chairman and members of the
14 Board, this panel is available for cross-examination.

15 MR. CHAIRMAN: Thank you, gentlemen.

16 MR. GOUDGE: I wonder, Mr. Chairman
17 and members of the Board, if I might contemplate this, I
18 don't know what time you intend to break for lunch, but
19 rather than commence the cross-examination now, since the
20 participants only got this can of evidence, in some cases,
21 first thing this morning, since Counsel has been huddling
22 over it since examining it. I think it would assist some of
23 us if we broke for lunch, now or very soon in order to give
24 ourselves just a little extra time.

25 I hesitate to suggest that, because
26 I certainly don't want to set a precedent, but for today I

1 think it might be useful.

2 MR. CHAIRMAN: Mr. Marshall, you
3 think --

4 MR. MARSHALL: Mr. Chairman, I
5 would be prepared to proceed if it -- if you would like not
6 to have to break now. I have my notes prepared for cross-
7 examination and I'm prepared to proceed now or later, which-
8 ever suits the Inquiry.

9 MR. CHAIRMAN: Well, we had planned
10 on breaking at 12:30 and if Mr. Marshall is prepared to
11 proceed, I think perhaps we should go ahead.

12 MR. GOUDGE: That is fine.

13 MR. MARSHALL: Unless, of course,
14 sir, there are other counsel who ordinarily would precede
15 me would wish to do so now. I'm not suggesting that I
16 proceed out of order.

17 MR. GOUDGE: It would be helpful
18 sir, if Mr. Marshall would be prepared to go on, if we could
19 lead off with him.

20 MR. CHAIRMAN: I would call on you,
21 then, Mr. Marshall, if I may, to carry on.

22 MR. MARSHALL: Thank you sir.

23 Q Mr. Burrell, I can't see
24 you, but I think you can hear me, and I'll address the
25 questions to you initially and if you wish to direct them
26 to some other member of the panel, perhaps you would do so.

MR. BURRELL: Fine.

CROSS EXAMINATION BY MR. MARSHALL:

1 Q Now, sir, on the
2 second page of the filed testimony, you describe the project
3 including the component to be built by Alcan Pipeline
4 Company. Could you tell me, sir, if Alcan proposes to build
5 during the summer construction season? Does Alcan propose to
6 build its segment of this pipeline project during the summer
7 season?

8 MR. SAKER: Alcan, you are talking
9 about the Alaska section?

10 MR. MARSHALL: Yes.

11 MR. SAKER: Well, I'm not prepared
12 to speak on what they're doing with their portion, but
13 perhaps Mr. Burrell, are you more acquainted with what their
14 plans are?

15 MR. BURRELL: Actually, as far as
16 this panel is concerned, certainly it's an overview, but as
17 far as the details of what the Alaska portion is going to be,
18 I'm personally not that familiar with it. If you like, we
19 can take that question and provide the information to you.
20 We will be pleased to do that.

21 Q My instructions, Mr.
22 Burrell, are that Alcan proposes a summer construction
23 based upon the use of a gravel pad. You don't know whether
24 that is so or not?

25 MR. HOLLINGWORTH: Perhaps Mr.
26 Marshall could advise which direction he's taking us in.

1 When I put on or present an overview panel to explain
2 pipelining in general, I did not anticipate a line of ques-
3 tioning that would deal with another portion of the project
4 in another country, and the panel members are obviously
5 not prepared to speak to that matter since they, quite
6 sensibly, didn't expect such a line of questioning.

7 MR. MARSHALL: The point I'm interested
8 in is this simply, Mr. Chairman. I was wondering as to the
9 extent that Alcan will be making use of the Alaska Highway
10 in Canada to support its construction project. It seems to
11 me to be a relevant issue to be considered by this Inquiry.
12 Are we going to be in a situation that if this project goes
13 ahead, not only will the Alaska Highway be called upon to
14 support construction in Canada, but also, will it be called
15 upon to support construction in the area immediately across
16 the border in Alaska that is going to be built by Alcan, and
17 if my instructions are correct, it's going to be built during
18 the same time period that Foothills contemplates building
19 in the Yukon.

20 MR. HOLLINGWORTH: That's a bit different
21 question, sir, from the use of the gravel pad.

22 MR. MARSHALL: Well, I was not asking
23 about the gravel pad. I was asking about the season. I want
24 to know if Foothills knows if their friends south of the
25 border are intending to build the American section of this
26 line at the same time that construction is going on in

1 Canada. It seems to me it would be a very fundamental
2 question.

3 MR. BURRELL: A I think you are getting
4 into the area of immigration and transients and so on. This
5 is a matter that we said we would address in a later panel.

6 Q It's not that at all, Mr.
7 Burrell, with respect. I want to know whether or not they are
8 going be building in Alaska at the same time you are building
9 in Canada, and I want to know if their logistic support
10 plan calls upon using the Alaska Highway through the Yukon
11 to support construction in Alaska.

12 A We would have to, to acquire
13 the answer to that question, we will have to get the infor-
14 mation from Alcan and provide it to you. Our project is
15 the project in the Yukon. Certainly, we have understanding
16 of what the Alcan project is doing, but the actual details
17 that you are requesting here, we'd have to provide that to
18 you. Not that we wouldn't, we will, if you require it.

19 Q Thank you, Mr. Burrell.
20 You raised the topic and it was the subject of my next
21 question. Have you any information as to the extent to which
22 Alcan anticipates that its work force, and those seeking
23 work on its project will travel to Alaska through the Yukon
24 via the Alaska Highway?

25 A Mr. Marshall, we intend
26 to fully address this question when we bring our panel for-
ward on immigration and population and transient, and we will

1 have some detailed evidence in that area, and I think your
2 concerns that you are raising now, will be properly handled
3 at that time.

4 Q Thank you. I am content to
5 wait till we receive that evidence, provided we don't have
6 to wait long, Mr. Hollingworth.

7 MR. HOLLINGWORTH: Be patient, Mr. Marshall.

8 Q Also on the second page,
9 gentlemen, you state

10 "Gas removed in Yukon for use by Yukon communities,
11 will be replaced in Alberta by gas containing the
equivalent heating value."

12 Mr. Burrell, I think I should address this question to you.
13 Am I correct that such a gas swap technically involves the
14 export of U.S. gas to Canada and then the export of Alberta
15 gas to the United States to replace it?

16 MR. BURRELL: I think, technically, that's
17 correct.

18 Q And it's clear, is it not,
19 that this proposal for a gas swap by Foothills would require
20 applications to an approval by the National Energy Board,
21 the Federal Power Commission and the Government of Alberta?
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1 A That matter will be addressed,
2 Mr. Marshall, in the panel that will be presenting evidence
3 next. The matters that you've discussed have taken into con-
4 sideration and steps have been taken to make this gas avail-
5 able and to arrange with the necessary regulatory authorities
6 to do so.

7 Q Well, Mr. Burrell, I'm aware
8 of some of that, at least, because you and I have been through
9 this before, but I am correct, am I not, that there would have
10 to be an application to those three agencies, two agencies
11 and the Government of Alberta?

12 A Certainly the, as far, I sup-
13 pose, as far as the gas is concerned, the quantity of gas
14 which is coming into Canada is the same quantity that's going
15 out, excluding fuel and it's an exchange within the country.
16 The advice, of course, that I have is that if we can get the
17 export, or if we can get an export arrangement out of Alberta
18 for sale of gas within Canada, which is really what the case
19 is, is the sale of gas, the sale is deemed to be to the Yukon
20 communities and it's within Canada.

21 As far as the concerns with the U.S.,
22 that matter was addressed in the application, to by Alcan to
23 the FPC.

24 Q Well, Mr. Burrell, perhaps
25 I should take it step by step. If it is intended that there
26 by Alberta gas, in effect, swapped for the American gas used

1 in the Yukon, that would require approval by the Alberta Govern-
2 ment?

3 A Yes, and arrangements are
4 being made now to seek such an approval.

5 Q Has an application been made
6 to the Energy Resources Conservation Board for that?

7 A No, but I've been told it
8 will be made in the next few weeks.

9 Q Yes, and in order for Ameri-
10 can origin gas to be dropped off in the Yukon there would have
11 to be an application made and approval obtained from the Fed-
12 eral Power Commission of the United States?

13 A That matter was dealt with
14 in the application of Alcan to the Federal Power Commission.

15 Q And there would have to be
16 an application to the National Energy Board to permit Alberta
17 gas to be transported to the United States to make up for the
18 gas left off in the Yukon, would there not?

19 A The matter has been brought
20 in evidence before the National Energy Board and they're aware
21 of the intent of the program, yes.

22 Q There has been no application
23 made to the NEB for the requisite authorization and permits, has
24 there?

25 A It's included as part of our
26 application. We've made that statement into, in our evidence

1 presented to the National Energy Board.

2 Q Now at the bottom of Page 2,
3 you state, "the system is an overland one as unanimously fa-
4 voured by the recent decision of the Federal Power Commission."

5 A Yes

6 Q You don't mean to suggest, do
7 you, sir, that the Federal Power Commission unanimously favour-
8 ed the Alaska Highway project?

9 A It doesn't say that, I don't
10 believe, Mr. Marshall.

11 Q Would you turn to Page 3,
12 please, Mr. Burrell..

13 It states that construction of the
14 pipeline would commence in the summer of 1979 and I'm looking
15 here at the second paragraph.

16 A Yes.

17 Q Do I understand correctly
18 that when you are referring to the summer of 1979, you are
19 dealing there with actual pipelining.

20 A I think that, as far as the
21 construction aspect is concerned, perhaps Mr. Saker would be best
22 to address that.

23 MR. SAKER:

24 Yes, Mr. Marshall, we're talking
25 about laying pipe in '79.

26 Q Right. Now, in order to

1 start laying pipe in the summer of 1979, when does Foothills
2 consider that it would have to have all the required authoriza-
3 tions in place?

4 A When the permit is issued, and
5 if it is issued to us, in early '78, we would have
6 then sufficient time to get ready for construction in 1979.

7 Q Now, you talk about permits
8 issued in early 1978, can you be more precise than that?

9 A No, I don't know whether it
10 would be January, February or March.

11 Q I see. Any one of those
12 would be good enough, would it?

13 A Any time in early '78.

14 Q Yes, the first quarter, is
15 that right, Mr. Saker?

16 A That is what you said.

17 Q Is that correct, the first
18 quarter?

19 A The first part of '78,
20 whether it be the first quarter or the first half.

21 Q Now, when you say the permits
22 by early 1978, you include in that the grant of a right-of-
23 way or an easement.

24 A Yes.

25 Q So you're anticipation then
26 is that there will be a grant of a right-of-way or an easement
early in 1978 so as to permit you to meet this construction

1 schedule which sees the first pipe laying occurring in the
2 summer of 1979?

3 A Yes.

4 Q Thank you.

5 Now, my understanding is that, with
6 pipelining you have some activities that go on prior to ac-
7 tually starting to lay pipe in the ditch. I'm thinking speci-
8 fically of starting with a survey. Would that be so, Mr.
9 Saker?

10 A That's right.

11 Q Now, assuming a start of
12 pipe laying in the summer of 1979, when would Foothills want
13 to get on the ground and do its surveying?

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1 A 1978. After the permit was issued to us

2 MR. MARSHALL: Well having regard to
3 the lead time requirements that we were discussing earlier,
4 what is the latest date that Foothills feels that it can
5 do it's surveying of the right-of-way and still be ready to
6 start construction in the summer of 1979?

7 A Mr. Marshall, I think you
8 are aware of Volume 9 of the submission we made in Ottawa, and
9 there's a construction schedule in there lays out our
10 construction program. But I think if you refer to that, you
11 will see how we anticipate all our different programs falling
12 into place.

13 Q Well, I don't have that
14 volume in front of me, sir, and perhaps you would be good
15 enough to indicate when it indicates it's survey would get
16 under way.

17 A Towards the end of the
18 year of 1978, October or so.

19 Q That's when you anticipate
20 doing the surveying?

21 A That's what our
22 construction schedule shows, sir.

23 Q Now, is that when you
24 anticipate commencing it, or finalizing it?

25 A Well, we'll be on the line,
26 and when we do it we hope to do it once, which will be the

1 first and last time.

2 Q I'm not sure that I
3 follow you. I understand that there are various steps that
4 are involved in the survey, Mr. Saker. Perhaps you could
5 clarify this for me. Do you first do some kind of an
6 initial survey to lay out the right-of-way, and then come
7 back and do a more precise one to lay out the positions of
8 your compressor stations and so on?

9 A No, it would generally be
10 done the first time, Mr. Marshall.

11 Q I see. And you would
12 anticipate starting that in October of 1978?

13 A Yes, sir.

14 Q Would you not want that
15 work to get under way during the summer months before the
16 right-of-way is covered with snow?

17 A Well, if we had the
18 permit, I suppose, we'd start that much sooner.

19 Q So then, Mr. Saker, if
20 I understand correctly, your assumption is that you're
21 going to have a right-of-way in 1978 by October you're going
22 to be able to get your crews out laying out the line?

23 A We will be surveying the
24 right-of-way in October.

25 Q Are you going to be able
26 to determine surface drainage courses during that time of

1 the year, through snow cover?

2 A With the use of photos,
3 we'll already have ascertained most of that, Mr. Marshall.

4 Q You don't see a require-
5 ment to get ground truth information during part of the
6 survey process?

7 A We'll have done that prior
8 to the ground survey.

9 Q Well then I take it, Mr.
10 Saker, you anticipate that Foothills' forces will be out on
11 the right-of-way prior to October of 1978?

12 A We have been out now since
13 this program got under way and we will continue to be out
14 doing many observations, Mr. Marshall.

15 Q I see. When do you
16 anticipate that the Foothills personnel will want to get out
17 on to the right-of-way to do a study of drainage and erosion
18 control requirements?

19 A When we have the permit to
20 do so. As soon as we can get on to our proposed route.

21 Q You will recall having
22 presented a permafrost distribution slide with your evidence.
23 Mr. Burrell, perhaps I could direct my questions to you, and
24 you could pass them on as you see fit.

25 My observation was that
26 it shows the entire section of the Foothills (Yukon) Pipeline
in the Yukon to be in the discontinuous permafrost zone.

Littledale, Bouckhout, Burrell, Saker .
Cr Ex by Marshall

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A Yes.

Q And you state on Page 6, of your evidence that you propose to chill only the first 40 miles of the pipeline in the Yukon, is that correct?

A Yes.

Q And that means, does it not, that for the rest of the route in the Yukon, all of which is in the discontinuous permafrost zone, that the warm pipeline will melt or degrade any permafrost that is encountered?

MR. BURRELL: A Yes, I suppose that's true.

I think you have to though, Mr. Marshall, realize that the determination of the end of chilling point is determined by geo-technical people, experts in their fields, based upon information, field information, and this, the particular design that has been put forward in this aspect is based on that, as are other parts of the design.

Q Well, I appreciate that, Mr. Burrell, but you've told us that the entire line is in the discontinuous permafrost zone in the Yukon, there's no argument about that, but, you know, there's no argument about that - and it's clear that, by use of that term discontinuous permafrost zone, it's, the situation is this, there will be areas where there are pockets of permafrost and ^{areas} that are permafrost free.

1 A Yes, I guess we're getting
2 into the overall question of frost-heave, which, I'm sure,
3 you're very familiar with.

4 Q Not really, Mr. Burrell.

5 A Just let me say that the de-
6 sign of this system, as far as the geo-technical aspects are
7 the concerned, /point of chilling was determined by geo-technical
8 experts taking into consideration the very points that you're
9 trying to raise and I think that we can say no more than that.

10 Q Well, I think, perhaps the
11 questions go beyond that point, Mr. Burrell. Let's go back
12 to the definitions. You understand a zone of continuous perma-
13 frost to be one in which permafrost exists everywhere.

14 A Yes.

15 Q And the discontinuous perma-
16 frost zone is one where there is intermittent permafrost?

17 A Yes.

18 Q And it's clear that Foothills
19 is in the sector in Canada described as a discontinuous perma-
20 frost zone.

21 A Yes.

22 Q So that as the pipeline pro-
23 ceeds, there will be areas where there is some permafrost and
24 areas that are free of permafrost.

25 A Yes.

26 Q And I think you've agreed
with me at the outset, that in those areas where there is

1 permafrost and where you do not propose to run a chilled line, that
2 is all by the first 40 miles, that that permafrost will be
3 degraded by the warm gas in the pipeline.

4 MR. HOLLINGWORTH: Well, Mr. --

5 Q Is that not so?

6 MR. HOLLINGWORTH: Mr. Chairman and Members of
7 the Panel, I hate to interject when Mr. Marshall's questioning,
8 but there's something I must bring up. This is an overview
9 panel which was put on to explain pipelining in general as a
10 backdrop against the socio-economic considerations could be
11 evaluated.

12 Now, Mr. Marshall is starting into a
13 line of questioning that goes back a long way to a long sim-
14 mering dispute that's been going on between Foothills and
15 Artic Gas as to where you stop chilling gas. But what, may I
16 ask, does that have to do with socio-economic factors? Mr.
17 Marshall has certainly given no indication of where he's lead-
18 ing us and I don't see why this Panel, which does not include
19 geo-technical experts, should be called upon to answer such
20 questions before a Panel called to consider socio-economic
21 factors.

22 MR. MARSHALL:

23 Mr. Chairman, if I might respond to
24 that, I'm happy to see that Mr. Hollingworth hasn't lost any
25 of the bad habits that he picked up at Berger Inquiry.

26 The Panel is indeed presenting an

7 Mr. HOLLINGWORTH:
8 You're just performing a public
9 service.

10 MR. MARSHALL:

11 Thank you, Mr. Hollingworth.

12 MR. CHAIRMAN:
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14 Mr. Marshall, in response to one of
15 your earlier questions, I noted that Mr. Burrell indicated
16 that it would be something that would be dealt with by a later
17 panel and perhaps the witness could be given an opportunity
18 to indicate whether or not he indicates that this subject that
19 you've now raised will be dealt with by a later panel.

19 MR. BURRELL:
20 The matter of permafrost, sir, we
21 felt was in the point of which you chill a pipeline, chill a
22 gas or end a chilling, we felt was more of an engineering
23 matter and the reason, of course, that was mentioned was to
24 just to touch on the matter, but we fully did not intend to
25 get into it, realizing that it's an engineering matter and
26 something that the National Energy Board itself has addressed
for some time in Ottawa.

1 MR. MARSHALL

2 Well, Mr. Burrell, I don't want to
3 get into the debate that was eluded to by your Counsel about
4 where is the appropriate point to stop chilling. The only
5 point I'm interested in establishing is this: that once you
6 stop chilling the line and you continue to run it through an
7 area of discontinuous permafrost, when that line does encounter
8 patches of permafrost we're going to have a situation where
9 thermaparst ponds are created along the right-of-way. Is that
10 not so?

11 A I suppose that could be a
12 possibility, but on the other hand if it's permafrost that is
13 rock, then I don't think you'd see that happening, Mr.
14 Marshall.

15 Q Fine, thank you, Mr. Burrell.
16 Would you turn to Page 6 of the pre-
17 pared testimony, gentlemen. It's indicated there that the
18 compressor stations will be 65 miles apart, on average, and
19 you say, "the placement of these compressor stations is not
20 adjustable to any great extent".

21 Mr. Burrell, I'm not sure whether
22 you wish to answer this question or wish to pass it on. I
23 was just wondering about what degree of inflexibility you see
24 in the selection of compressor station locations?

25 A Well, it depends upon many
26 things. It depends on the train, Mr. Marshall, it depends on

1 where the elevations along the line, it, these things, as you
2 know, are set from studies, from flow studies and the location
3 is picked, say theoretically and then it's located in the
4 field to fit the best location and depending upon the terrain,
5 the elavation and so on, the flexibility can be very limited
6 or can be considerably more than that.

7 Now, as far as how much flexibility
8 you have, I think you have to look at each particular compres-
9 sor station and site and determine from there. Each site is
10 treated separately, Mr. Marshall.

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Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 Q Well, Mr. Burrell, do I
2 understand the situation correctly, that it's a matter of the
3 hydraulic balance of the line that really determines where a
4 compressor station ought to be located.

5 A Yes, where it should be
6 located, yes.

7 Q And then it's the
8 particular ground conditions that exist in that immediate
9 area that determine where Foothills will choose to select
10 the site? You'll try to find the best ground in that
11 immediate area?

12 A Yes, I think that's basically
13 right. There are many factors involved.

14 Q Yes. Now, my concern is
15 this and I suppose it may be a bit of a hypothetical
16 situation -- but if it were felt that there were a
17 community or an environmental concern with respect to the
18 location of such a compressor station, on average, taking
19 an average compressor station, what sort of flexibility
20 would Foothills have, say, in moving that compressor station
21 one mile away, or two miles away, without really throwing
22 the hydraulic balance of the line out of kilter? Is there
23 any sort of a general answer that you could give me to that
24 sir?

25 A Well I'm sure you'd have
26 to look at each particular situation, Mr. Marshall, and

1 there is flexibility, and given the situation, what the
2 difficulty is, the problems that particular location creates
3 and the given terrain and so on, there's considerable
4 flexibility, and I think you'd have to -- there could be
5 considerable flexibility.

6 I think you'd really have to
7 address a specific situation.

8 Q I see. Well, I'll try one
9 more time. You may not want to agree with this, and I'll
10 understand, sir, if you don't.

11 My advisors indicate that there's
12 perhaps about a half a mile flexibility in either direction
13 in the location of compressor stations?

14 A I've heard that member
15 quoted. I would have to know the situation under which that
16 half a mile was selected, Mr. Marshall.

17 Q Thank you, Mr. Burrell.
18 Now, you've indicated the spacing
19 of these compressor stations and said that it would be
20 about 65 miles on average. Could you tell me sir, if this
21 was for the initial throughput volumes, or the ultimate
22 throughput capability of 3.4bcf a day?

23 A It's based on the 2.4
24 level, Mr. Marshall.

25 Q You made reference to the
26 ultimate capability of 3.4 bcf a day and I was wondering

1 if you could give some indication as to the compressor
2 station spacing that would be required if the volumes being
3 transported by the line were to increase to the level that
4 you have indicated?

5 A I know the matter of the
6 increased capability of the system is addressed in our
7 filing, the location of these stations is contained in
8 volume 10, page 10A - 3.3.

9 Q Is this for the initial
10 case, or the expanded case, sir?

11 A This is for the expansion
12 case. The one that you were referring to.

13 Q Fine, I can check it there
14 then.

15 Now sir, on page 7 of the testimony
16 you indicate the locations of six camps. As I understand it
17 the average manpower at each of these six camp locations is
18 750 men. Is that correct?

19 MR. SAKER: That's approximately right.

20 Q Well you say that's the
21 average. I wonder what the peak would be?

22 A Eight hundred and some odd.

23

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Saker, Burrell, Bouckhout, Littledale
Cr Ex by Marshall

1 Q Now these are camps designed
2 to accommodate the spreads engaged in pipe laying, is that
3 correct?

4 A That's right.

5 Q There would, I suppose, be
6 other camps for other types of activities, would there not?

7 A Which ones are you referring
8 to?

9 Q Well, I'm thinking for examp-
10 le, of camps at borrow sites, camps for logistic purposes,
11 camps for men working in compressor stations, camps for
12 men working on construction of O and M facilities in various
13 communities, that type of thing, Mr. Saker.

14 A Mr. Marshall, to my knowledge,
15 the only other camps that might exist would be a small camp
16 where the compressor stations are being built and if the main
17 camp was close enough to a compressor station, that construc-
18 tion crew on the compressor station, this station would use
19 that main camp. In other words, we could work both crews out
20 of the same and the other camp that might exist would be that
21 for a small crushing crew, which would consist of less than
22 ten men and they, in all likelihood would have no more than two
23 or three trailers in a borrow pit for a very short time.

24 Q Well, Mr. Saker, on construc-
25 tion of a compressor station, would there not be at least a
26 couple of hundred men involved?

Saker, Burrell, Bouckhout, Littledale
Cr Ex by Marshall

A Yes, it will.

Q And so, would it be fair to say then that there will either have to be a separate camp at the compressor station location to house a couple of hundred men or you're going to have to increase the size of the camps at the six locations you indicated, or some of them, so as to be able to accommodate this extra group of men who are not working pipeline as such, they're working on compressor stations.

A Well, the compressor stations is not, under my portion of the construction area, Mr. Marshall.

Q I see.

A Perhaps John Burrell here can have the answers for you.

MR. BURRELL: Perhaps it would be worthwhile if Mr. Littledale could perhaps could deal with this matter.

MR. LITTEDALE: On compressor stations construction, Mr. Marshall, you would probably have around 50 - 60 people working.

Q Well, do you know, Mr. Littledale, or is this based on what goes on in the Westcoast organization now? Take that as a precise figure.

A Yes, surely that in itself is knowledge, isn't it? Yes, I know because I'm in the process of building two to three compressor stations right now.

1 Q And are these of the size and
2 type as the ones that Foothills (Yukon) proposes to install?

3 A No , there are some physical
4 differences, Mr. Marshall, but of the same, we have built sta-
5 tions of the same type. Now, you know, when you say of the
6 same type and this is employing the air craft derivative type
7 of engine prime loader mover auxiliary buildings, housing,
8 auxiliary equipment and so on. And the only difference that
9 we're talking about here, as compared to what we have built,
10 is in the size, the physical size of the prime movers and some
11 of the associated equipment. Now this physical size does not
12 mean that you are going to quadruple the number of men or, you
13 know, increase it very dramatically. It just isn't that type
14 of a project.

15 Q Well, Mr. Littledale, I
16 looked at slide number 49 that was presented by the panel and
17 it seemed to give some total construction manpower requirements
18 for the Yukon section. Do I understand correctly that this
19 would include not only construction workers on the pipeline,
20 but also those working on the construction ^{of} compressor stations?

21 MR. BURRELL: Mr. Marshall, this is
22 evidence that we're going to be leaving in town and perhaps it
23 would be much better to hear what we had to say at that time
24 and it may answer many of the questions that you're raising
25 now.

26 Q I thought your next panel was

Safer, Burrell, Bouckhout, Littledale
Cr Ex by Marshall

1 socio-economic?

2 A Well, it deals with the con-
3 struction man power requirements.

4 Q Oh, I see.

5 Mr. Burrell, you're not able to tell
6 me if this --

7 A Oh, we can tell you, it's a
8 case of, I was wondering if it would be more appropriate to
9 hear our evidence first and then ask the questions.

10 Q Well, sir, this in your evi-
11 dence, this chart is in your evidence. I was, my interest is
12 this. You presented what proposed to be a chart showing the
13 total construction man power requirements of Yukon. I want
14 to know firstly whether that includes construction forces
15 engaged in constructing compressor stations and, if so, I want
16 to know the numbers of personnel ^{that} are there assigned to the
17 latter task. That is constructing compressor stations.

18 A Yes, that does include
19 not only the pipeline but the compressor stations, the logistics
20 people requirements, inspection personnel, access road construc-
21 tion, et cetera.

22 Q I see. Do you know how many
23 of them are working on the compressor stations?
24
25
26

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 A Well for example, the
2 compressor stations in the winter of 1980 we show a number
3 of 80 personnel.

4 Q I see, thank you. That's
5 helpful.

6 Gentlemen, with respect to the
7 locations of the six camps that you have listed on page 7
8 of your testimony, I was wondering if you could tell us
9 which of those camps, if any, are located in a close
10 proximity to communities in the Yukon?

11 MR. SAKER: No, I couldn't tell you
12 right off hand, Mr. Marshall, we have looked at the camps,
13 and our man here is John Ellwood, who has also been in
14 touch with us and we have moved our suggested locations to
15 these mile posts to accommodate the provision of the local
16 people by being a mile or two away from a local community
17 and also to provide the best access for our construction
18 route.

19 MR. BURRELL: I'd like to add to
20 that, and that is that these locations are not cast in stone,
21 they can be moved, and I'm sure that as we develop the
22 project and as it moves forward and we get input and so on,
23 that some of the camps will move. These are, as I think Mr.
24 Saker referred to earlier, proposed locations of camps.

25 Q Do I understand correctly
26 then, sir, that these locations shown on page 7 differ in

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 some cases from those shown on the alignment sheets?

2 These locations reflect some recent
3 changes do they?

4 MR. SAKER: They may well do, Mr.
5 Marshall.

6 Q Mr. Burrell, does Foothills
7 have a policy of --

8 MR. BURRELL: Mr. Marshall, in
9 response to that last question, I believe the spread sheets
10 which are contained within Volume 9, I believe it is, shows
11 the camp locations as denoted in this overview.

12 Q I see. Mr. Burrell, does
13 Foothills have a policy of isolating the construction camps
14 from the communities?

15 A Yes, and that matter is
16 again dealt with in the next panel, Mr. Marshall.

17 Q I will be, will it?

18 A Yes.

19 Q Fine.

20 Well, I'll save a few questions
21 then for the next panel on that subject.

22 On Page 7, the third full paragraph
23 you state this:

24 "workers from the South as required, will be
25 transported in and out of the Yukon by air"

26 Mr. Burrell, do I understand

1 correctly that Foothills anticipates that by far the
2 majority of pipeline construction workers would have to
3 come from the south?

4 A Yes, because the pipeline
5 skills required, the special skills required to construct
6 the pipeline are not totally available here, but certainly
7 there are opportunities for the local residents to have
8 employment on the construction.

9 Q Have you got some sort of
10 a figure that Foothills is using as to the percentage of
11 the construction workers that will be from the south as
12 opposed to from the Yukon.

13 A We have some numbers, and
14 here again, I think that this is a matter that we will
15 address in the next panel.

16 Q Fine, thank you, sir.

17 Now, on 7 as well, you deal with
18 the topic of logistics and make this statement.

19 "The number of truck passages will not be sufficiently
20 great to cause problems on the Alaska Highway, either
to it's other travellers or to the Highway itself"

21 Have you found that, Mr. Burrell?
22 A Yes.

23 Q In making that statement you are
24 relying on an estimate that Foothills has had produced of
25 the number of truck trips on the Highway that would be
26 necessary for hauling pipe and various supplies?

A Yes.

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 Q Could you tell us, sir,
2 how many tons of material Foothills plans to haul in on the
3 Highway?

4 A In our logistics document
5 and I'm sure it's also in the documents which we
6 have filed, and I'm sure you're familiar with them. There
7 is a report entitled "Alaska Highway 48-inch Pipeline
8 Project Logistics Requirements and Costs Trunk by Trimac
9 Consulting Services Ltd.". Table 1 of that document provides
10 a breakdown by year by a number of items of the quantity
11 of materials required by this project.

12 Q I see. Now, sir, I'll
13 take a look at the report, but could you give me some sort
14 of a figure as to the number of trucks per hour that will
15 be engaged in hauling this material up and down the highway?

16 A This is a matter that we
17 were prepared to talk about in the next panel, Mr. Marshall.

18 Q And you're not prepared
19 to talk about it now?

20 A I think it's more
21 who appropriate, because the person/would be addressing that is
22 not on this particular panel.

23 Q I was led into it by the
24 statement on this page of your evidence.

25 A This is an overview, Mr.
26 Marshall.

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 It is intended to be that, and as
2 I said, the real intent of this was to provide a quick
3 overview of the project and that we would not be dealing
4 with the local socio-economic matters in this overview, but
5 rather leaving them for more detailed discussion in the
6 panels that follow.

7 Q 'So I take it then, Mr.
8 Burrell, that you're not prepared to answer questions
9 relating to the details of the traffic up and down the
10 highway.

11 A I think Foothills is
12 prepared to answer them. I'm just suggesting that perhaps
13 addressing them to the next panel is more appropriate.

14 Q All right I'll be content
15 with that if you'll have somebody on the panel who can
16 address that.

17 Perhaps you can deal with this one
18 question pertaining to the highway, though, Mr. Burrell.
19 This relates directly to the passage I quoted on page 7.

20 A On page 7?

21 Q Yes. About the volume
22 not being such as to interfere with others using the Highway
23 or with the Highway itself. I was just wondering whether
24 Foothills had made any allowance in it's capital cost
25 estimates to cover maintenance and repair to the Highway
26 made necessary by project generated traffic?

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 MR. SAKER: Mr. Marshall, it is a
2 public Highway, and the licensing is paid by the owner of the
3 vehicles, which goes back to the Federal Government and they
4 do the maintaining of the Alaska Highway, not the users.

5 MR. BURRELL: I think I want to add
6 to that, Mr. Marshall, in that we recognize that any costs
7 that would be attributed to our project that we're certainly
8 prepared to accept those and I think that matter was
9 discussed at the National Energy Board when we talked about
10 that very thing. An example was brought up, for instance
11 if a bridge was not capable of taking the load, which the
12 movement of material for our project would require, then
13 we would either have to find some other means or we would
14 have to make sure the bridge was reinforced sufficiently
15 to take such a load.

16 Q Well, let's stick with the
17 Alaska Highway itself, Mr. Burrell. Is Foothills, as a
18 matter of policy, prepared to cover any costs of maintenance
19 and repair to the Highway made necessary by project generated
20 traffic.

21 A I think you're getting into
22 a very broad subject which has often been referred to as
23 impact funding and that matter is a matter which Mr. Blair
24 will address as a policy witness for this Company.

25

26

1 Q I see, well, it may be a broad
2 subject. I was interested in one specific. You're not able to
3 instruct us on that now?

4 A I think that it's a matter that
5 Mr. Blair will address and it's most appropriate that he
6 address that and the broad subject of impact funding.

7 Q Do I understand correctly,
8 though, from Mr. Saker, that insofar as the capital cost esti-
9 mates prepared by Foothills are concerned, that there is not
10 a specific provision in those estimates that would read Alaska
11 Highway Maintenance and repair?

12 MR. SAKER: That's right, there is not such
13 an item.

14 Q Now on to Page 9, gentleman,
15 dealing with some environmental situations and I think it's
16 Mr. Bouckhout who sponsored this part of the testimony. Would
17 you say this, Mr. Bouckhout, and I quote, "In the case of fish,
18 preservation of population is insured - -"

19 MR. CHAIRMAN: Mr. Marshall, excuse
20 me, you are starting now a new line of questioning and I note
21 we're up against 12:30. Perhaps this is a convenient time to
22 adjourn.

23 MR. MARSHALL: Yes, it is, thank you.

24 MR. CHAIRMAN: I suggest then that
25 we do that and reconvene at two o'clock.

26 PROCEEDINGS ADJOURNED

1 (PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

2 MR. GOUDGE: Perhaps we would
3 reconvene now.

4 MR. CHAIRMAN: Mr. Marshall, are
5 you prepared to proceed.

6 MR. HOLLINGWORTH: Mr. Chairman
7 and members, possibly before we continue sir, I could make
8 the filings which I spoke of this morning. I noticed Mr.
9 Marshall's cross-examination necessarily gets into the
10 filings and perhaps it would be appropriate to file these
11 documents before he carries on.

12 I'd like to file with the Inquiry
13 the application of Foothills Pipelines (Yukon) Ltd. for a
14 Certificate of Public Convenience and necessity for a
15 pipeline to the National Energy Board. I'd like too to file
16 the application for a Grant of Interest in Lands in the
17 Yukon Territory to the Department of Indian Affairs and
18 Northern Development and the associated volumes connected
19 with the application, Volume 1 - Facilities; Volume 2 -
20 Facilities Continued; Volume 3 - Financial; Volume 4 - Supply
21 Requirements and Interconnecting Facilities; Volume 5 - Public
22 Interest; Volume 6 - Public Interest continued; and Volume 7 -
23 Addendums. Included with the application, sir, is the, are
24 the alignment sheets for the proposed route and the
25 environmental atlas, and I have some further documents as
26 well, sir, of a supportive nature. One document was made

1 reference to this morning, and it is the studies related to
2 alternate methods of connecting Mackenzie Delta Gas dated
3 March '77. A booklet entitled "Socio-Economic Policies and
4 Undertakings of Foothills Pipelines (Yukon) Ltd.", a booklet
5 entitled "Projected Price of Light Fuel Oil and Electrical
6 Energy in Selected Yukon Communities, 1976 to 1992" date of
7 preparation November, 1976. A booklet entitled "Projected
8 Price of Light Fuel Oil and Electrical Energy in Selected
9 Yukon Communities, 1976 to 1992" revised cost Projection,
10 January, 1977, a book referred to in the hearing this morning,
11 the Alaska Highway 48-inch Pipeline Project Logistics
12 Requirements and Costs, prepared by Trimac Consulting
13 Services Ltd. of Calgary, dated April 27th, 1977. I have
14 in addition, sir, a number of Volumes. I can go through the
15 titles here if you wish in filing them. They relate to the
16 environmental and engineering aspects of the project, and
17 I'd like to file those at this time too. They are: Native
18 Seed Multiplication by Vaartnou & Sons Enterprises Ltd.,
19 Velocity attenuation Curves, a study prepared by Foothills
20 Pipelines (Yukon) Ltd., a study prepared by Canadian
21 National Communications entitled "Supply of Telecommunica-
22 tions Services during Construction and Operation Phases of
23 the Alcan Gas Pipeline project, an engineering report
24 entitled "Report on River Bed Scour White River,
25 and Donjek River," Yukon Territory prepared by Unies Limited.
26 A study entitled "The Summary of Frost Heave Design" by E. B.

1 A. Engineering Consultants Limited, a study prepared by
2 Foothills entitled "Pipeline Design at Fault Crossings", a
3 study prepared by Canuck Engineering Ltd. entitled "Design
4 Data for Major River Crossings", a study of Beak
5 Consultants Limited entitled "A Preliminary Inventory of
6 Fish Resources in Southern Yukon Territory, 1976", a document
7 entitled Northern Revegetation Research prepared by
8 Vaartnou & Sons Enterprises Limited, a study entitled
9 "Fall 1976 Waterfowl Migration Locations for the Proposed
10 Alaska Highway Pipeline Southern Yukon" prepared by Beak
11 Consultants Ltd., a study entitled "Anticipated File
12 Settlement, Foothills (Yukon) Pipeline Route" prepared by
13 Klohn Leanoff Consultants Ltd., Terrain Evaluation for
14 Foothills Yukon Pipeline Route, prepared by Klohn Leanoff
15 Consultants Ltd.

16 APPLICATION OF FOOTHILLS PIPELINES (YUKON) LTD. AND
17 ACCOMPANYING VOLUMES AND ALIGNMENT SHEETS MARKED AS EXHIBIT 3.

18 STUDIES RELATING TO ALTERNATE METHODS OF CONNECTING
19 MACKENZIE DELTA GAS, MARCH 1977, MARKED AS EXHIBIT 4.

20 BOOKLET, SOCIO-ECONOMIC POLICIES AND UNDERTAKINGS, MARKED
21 AS EXHIBIT 5

22 BOOKLET - PROJECTED PRICE OF LIGHT FUEL OIL AND ELECTRIC
23 ENERGY IN SELECTED YUKON COMMUNITIES 1976 - 1992, NOVEMBER
1976, NORTH GROUP CONSULTING, MARKED AS EXHIBIT 6.

24
25 BOOKLET - PROJECTED PRICE OF LIGHT FUEL OIL AND ELECTRIC
26 ENERGY IN SELECTED YUKON COMMUNITIES 1976 - 1992, JANUARY 10,
1977, NORTH GROUP CONSULTING, MARKED AS EXHIBIT 7.

1 ALASKA HIGHTWAY 48" PIPELINE PROJECT LOGISTICS, REQUIREMENTS
2 AND COSTS, TRIMAC CONSULTING SERVICES LTD., MARKED AS
3 EXHIBIT 8.

4
5 NATIVE SEED MULTIPLICATION, VAARTNOU AND SONS ENTERPRISES
6 LTD. JANUARY 1977, MARKED AS EXHIBIT 9.

7 VELOCITY ATTENUATION COURSES, MARKED AS EXHIBIT 10.

8
9 CN COMMUNICATIONS. SUPPLY OF TELECOMMUNICATION SERVICES
10 DURING CONSTRUCTION AND OPERATION PHASES OF THE ALCAN GAS
11 PIPELINE PROJECT, FEBRUARY, 1977, MARKED AS EXHIBIT 11.

12 REPORT ON RIVER BED SCOUR, WHITE RIVER AND DONJEK RIVER,
13 YUKON TERRITORY, UNIES LTD., MARKED AS EXHIBIT 12.

14 SUMMARY OF FROST HEAVE DESIGN, E.B.A. ENGINEERING CONSULTANTS,
15 LTD., MARKED AS EXHIBIT 13.

16
17 PIPELINE DESIGN AT FAULT CROSSINGS, MARKED AS EXHIBIT 14.

18
19 DESIGN DATA FOR MAJOR RIVER CROSSINGS, CANUCK ENGINEERING LTD.,
20 DECEMBER, 1976, MARKED AS EXHIBIT 15.

21 PRELIMINARY INVENTORY OF FISH RESOURCES IN SOUTHERN YUKON
22 TERRITORY 1976, BEAK CONSULTANTS LIMITED, JANUARY 1977,
23 MARKED AS EXHIBIT 16.

24 NORTHERN REVEGETATION RESEARCH, VAARTNOU AND SONS ENTERPRISES,
25 LTD., JANUARY 1977, MARKED AS EXHIBIT 17.

26 FALL 1976 WATERFOWL MIGRATIONS IMPLICATIONS FOR THE PROPOSED

- 1 ALASKA HIGHWAY PIPELINE, SOUTHERN YUKON, BEAK CONSULTANTS LTD.
2 DECEMBER 1976, MARKED AS EXHIBIT 18.
- 3 ANTICIPATED THAW SETTLEMENT, FOOTHILLS (YUKON) PIPELINE ROUTE,
4 KLOHN LEANOFF CONSULTANTS LTD., MARKED AS EXHIBIT 19.
- 5 TERRAIN EVALUATION FOR FOOTHILLS (YUKON) ROUTE, KLOHN LEANOFF
6 CONSULTANTS LTD., MARKED AS EXHIBIT 20.
- 7 MACKENZIE SEWAGE, AUGUST 1975, ASSOCIATION ENGINEERING
8 SERVICES LTD., MAY 5, 1977, MARKED AS EXHIBIT 21.
- 9 ENVIRONMENTAL ORIENTATION PROGRAM, A CONCEPTUAL REVIEW, FEBRUARY
10 10, 1976, MARKED AS EXHIBIT 22.
- 11 INTERIM REPORT - REVEGETATION RESEARCH PROGRAM, VAARTNOU AND
12 SONS LTD., DECEMBER 1975, MARKED AS EXHIBIT 23.
- 13 FEASIBILITY STUDY FOR USING REMOTE SENSING FOR ENVIRONMENTAL
14 SURVEILLANCE OF ARCTIC PIPELINES, INTERA ENVIRONMENTAL
CONSULTANTS LTD., MARKED AS EXHIBIT 24.
- 15 GEOLOGICAL ENGINEERING STUDIES, SHEEP MOUNTAIN AND SHAKWAK
16 FAULT AREAS, ALCAN CORRIDOR, YUKON TERRITORY, SPROULE
17 ASSOCIATES LIMITED, MARKED AS EXHIBIT 25.
- 18 APPENDIX II, ROUTE PHOTOGRAPHS, CANUCK ENGINEERING LTD.,
19 OCTOBER 1976, MARKED AS EXHIBIT 26.
- 20 TEST HOLE LOGS, FOOTHILLS (YUKON) PIPELINE ROUTE, MARKED AS
21 EXHIBIT 27.
- 22
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- 24
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- 26

1 MR. HOLLINGWORTH: Mackenzie Sewage, a study dated Aug-
2 ust, 1975, by Associated Engineering Services Limited, the
3 Environmental Orientation Program, a conceptual review and in-
4 house document prepared by Foothills; an Interim Report on
5 Re-vegetation Research Programs, prepared by Vaartnou and Sons
6 Ltd; a document entitled "A Feasibility Study for Using Remote
7 Sensing for Environmental Surveillance of Artic Pipelines",
8 prepared by INTERA Environmental Consultants Ltd; a Report on
9 Geological Engineering Studies, Sheep Mountain and Shakwak
10 Fault Areas, Alcan Corridor, Yukon Territory, prepared by
11 Sproule Associates Ltd; a document prepared by Canuck Engineer-
12 ing Ltd., entitled "Appendix II, Route Photographs"; and, fin-
13 ally, a document entitled, "Test Hole Logs, Foothills (Yukon)
14 Pipe Line Route", prepared by Klohn, Leonoff Consultants
15 Limited.

16 I'd like to make those filings at this
17 time.

18 MR. CHAIRMAN: Thank you, Mr. Holling-
19 worth.

20 MR. HOLLINGWORTH: There are a couple
21 of other matters, sir. The map on the wall to your left has
22 been prepared by Foothills' Drafting Department and I under-
23 stand, sir, that the Board feels it would be appropriate to
24 have that marked as an exhibit to the Inquiry and we are also,
25 sir, going to affix a wall map on the far wall of the Hearing
26 Room, which I think will be more detailed and show you in a

1 greater scale the proposed project .

2 Lastly, sir, in the overview evidence
3 this morning, it's been brought to my attention that there is
4 an error on Page 7, setting out the locations for camps. The
5 camp indicated at Mile Post 206 is an error, that should read 266.

6 (ROUTE MAP MARKED AS EXHIBIT 23) ---

7 (DETAILED ROUTE MAP MARKED AS EXHIBIT 29)

8 (SEISMIC DESIGN PROCEDURES, KLOHN, LEONOFF CONSULTANTS, MARKED
9 AS EXHIBIT 30)

10 MR. CHAIRMAN: Thank you, Mr. Holling-
11 worth. Are you ready to proceed, Mr. Marshall?

12 MR. MARSHALL: Yes, sir, I am.

13 Before I resume the cross examination,
14 it's just a procedural question, sir. We have just been handed
15 some evidence which I understand is for the next panel. There
16 is a fair amount of material and it would seem that most coun-
17 sel are going to have difficulty in digesting that and
18 proceeding right away to cross examination of the next panel.
19 The third panel was to be the Nortran Panel. I believe we
20 have that evidence now. I suggested to Mr. Goudge at the noon
21 hour that it might make some sense to reverse the order in
22 which those panels are called because I anticipate that cross
23 examination of the Nortran Panel would require much less pre-
24 paration by Counsel generally than would cross examination for
25 the larger panel dealing with the socio-economic matters..
26 I wondered if this might be considered so that we'd know how
to plan our time?

1 Does this cause you any difficulty,
2 Mr. Hollingworth?

3 MR. HOLLINGWORTH: I'm afraid it
4 does present a difficulty from the logistic point of view, sir.
5 Mr. Virtue^{is} another member of the Nortran Panel and is not
6 coming in until the afternoon plane, which I suppose would make
7 him unavailable for the Nortran Panel today and further Mr.
8 Deyell, who is a member of the second or the second panel, the
9 large panel, must go back to Calgary by noon tomorrow. Those
10 are the problems I have with that switch.

11 MR. GOUDGE: Can I suggest, sir, that
12 you leave that with me and I try at the break to do what seems
13 to be now a heroic feat of getting some agreements as to how
14 we can deal with this matter and if we're not able to resolve
15 it, then we can come back to you after our break this after-
16 noon.

17 MR. CHAIRMAN: Sounds like an excel-
18 lent suggestion, Mr. Goudge, fine. Mr. Marshall?

19 MR. MARSHALL: I'll carry on with Mr.
20 Bouckhout then, sir.

21 Mr. Bouckhout, would you turn to Page 9
22 of your filed testimony, please, the last full paragraph on the
23 page. You make this statement, "In the case of fish, preserva-
24 tion of populations is insured by taking care to minimize
25 siltation crossing streams and rivers at a location which does
26 not interfere with critical habitat and at the most opportune

1 time to avoid conflict with important life history functions
2 such as spawning and over wintering." Have you found that
3 passage, sir?

4 MR. BOUCKHOUT: Yes, I have.

5 Q DO I understand correctly that
6 what you are saying is that to safeguard fish you do three
7 things: you minimize siltation and I suppose expanded beyond
8 that, introduction of any other foreign substance into the
9 water course?

10 A That's correct, those are de-
11 sign matters and contingency matters.

12 Q Right. Then you, secondly,
13 you avoid critical habitat?

14 A Correct.

15 Q And thirdly, you cross streams
16 at non-critical times?

17 A Correct. Any or all of those
18 measures --

19 Q Can you tell me, Mr. Bouckhout,
20 how many identifiable streams and rivers Foothills proposes to
21 cross in the Yukon?

22

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1 A What is your definition
2 of an identifiable streamer river, Mr. Marshall?

3 Q Well, what is yours, sir.
4 How many have you identified?

5 A I believe our studies,
6 which we have scheduled and are undergoing right now, are
7 looking at some 70 to 80 in specifics.

8 Q I'm just not sure where that
9 leaves us, sir. Do I take it that you are in the process
10 of endeavoring to identify them now, as opposed to having
11 already completed the identification process?

12 A What I said, Mr. Marshall,
13 is that the studies we have ongoing in the field at the
14 present time are looking at approximately 70 to 80 stream
15 crossings. To give you a definitive answer precisely, how
16 many, whether it be 73, 75, whether there are others which
17 we consider to be insignificant, be it 121, 123, I simply
18 can't give you that answer.

19 Q I see. Well, sir, do you
20 know yet of the 70 to 80, that you're looking at? How many
21 of those support fish population?

22 A I don't personally know,
23 I'm sure our biologists do, but I don't personally.

24 Q Could you tell us, sir,
25 for how many of those you have sufficiently detailed
26

1 studies at the present time to permit you to identify critical
2 habitat, and the timing of such critical life history
3 functions, as spawning, over-wintering and migration?

4 A Again, Mr. Marshall, that's
5 the kind of question that I can't give you a precise number.
6 It is in the minority, I might say, I cannot give you a
7 precise number. That's the purpose of the studies we've
8 been undertaking for the last 8 to 10 months, and we will
9 continue to undertake for the next perior of a year, 18 months
10 2 years, whatever.

11 Q Well, if you can't help us
12 Mr. Bouckhout, that's fine. You appear to be the only
13 biologist that we're getting a crack at.

14 A Well, again, I might say,
15 Mr. Marshall, certainly, the other Inquiry which is, we will
16 be looking into these matters as well. We will have biolo-
17 gists, biologists who are doing a precise work for us,
18 available for that Inquiry, to go into these kinds of
19 specifics. I didn't view that we would get into those
20 kinds of specifics at this Inquiry, and this is precisely
21 the reason I don't have those biologists here with me now.

22 Q Well, sir, I raised it
23 because it's in your evidence.

24 A It is not in my evidence
25 how many streams we are crossing, or how many critical
26 habitats we have identified, Mr. Marshall. I have made a

Littledale, Bouckhout, Burrell, Saker.
Cr Ex by Mr. Marshall.

1 very general statement in my evidence.

2 Q Now sir, you spoke in your
3 evidence of avoiding times of critical life history functions.
4 I suggest to you sir, that this is going to be exceptionally
5 difficult to do because Foothills is chosen to build during
6 the summer months.

7 A I will not accept that
8 suggestion, Mr. Marshall.

9 Q What are you going to do
10 if you encounter a number of streams or rivers in which
11 critical life history functions are progressing during summer
12 months? Are you going to construct those crossings in the
13 winter time instead?

14 A That is a possibility for
15 some of the, in fact the bulk of the very major crossings,
16 we have construction flexibility, that we can in fact cons-
17 truct them in the winter time. We have, I might add, done
18 some work over the past winter identifying those streams in
19 the winter sections, which we are concerned about relative
20 to fisheries. There were some 14 crossings which we iden-
21 tified and assessed. Of those 14, some, I believe it is
22 8 or 9, happened to be dry. So they are not of a particular
23 concern in that respect.

24 Q That was in the 40 mile
25 section, was it?

26 A That was in about 110 mile

1 section, Mr. Marshall.

2 Q But with respect to the
3 70 to 80 streams and rivers that you say you are now looking
4 into, do I understand that you don't yet have enough data
5 to be able to say definitively whether you are going to be
6 crossing those in the summer time or in the winter time?

7 A In definitive terms, I would
8 say we are looking at them for the purpose of determining what
9 the potential impact would be of proposed crossings in the
10 summer or winter. If we find that the proposed schedule
11 will lead to undesirable impacts on the fish population to
12 the point where it is not acceptable, and that other measures
13 are not possible, or would not mitigate that impact, then
14 we will have to look at putting on a separate crossing crew
15 which would do it at the most opportune time.

16 Q Those decisions have not
17 yet been made.

18 A That's correct.
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1 Q With respect to birds and
2 mammals. Would there not be likewise seasonal times of
3 sensitivity?

4 A That's right. It's just
5 a matter of certain areas, very select, in most cases
6 very site specific areas that this occurs.

7 Q Right. Now if that
8 seasonal time is through the summer months that you are
9 intending to do your construction, what is proposed? Do
10 you plan to do that section or those sections of the line
11 during the winter time or do you want to do it in the
12 summer time or re-route, or what is your plan?

13 A Well, there's several
14 ways of reacting to this kind of a thing. I may perhaps
15 use an example which will best illustrate the points and
16 it's an example that I'm sure is very familiar to most people
17 here and that's the Sheep Mountain situation. We have
18 found through various studies and very detailed studies
19 that have been done prior to this submission of this proposal
20 that the critical period, the very important period of
21 utilization of Sheep Mountain in the vicinity of our
22 right-of-way extends from about late-mid to late September
23 around to about the following June. We have stipulated
24 in the environmental department that the construction
25 activity in that particular portion which would affect the
26 sheep population be done in the window outside that critical

1 period. That's an example of how you confront these kinds
2 of problems.

3 Q I see. Now you've sited
4 that example and you mentioned that certain river crossings
5 will be done in the winter time. Are there any other areas
6 of the route in the Yukon for which, for environmental
7 reasons, you have stipulated that construction must proceed
8 in a different window?

9 A There are none that I'm
10 aware of now. One other example that could occur would be
11 in reference to rare and endangered raptors, in particular,
12 I'm speaking of something like Peregrine Falcons, we again
13 have a study which will be under way within a matter of
14 a couple of weeks which will identify whether that in fact
15 will be a problem for us or not. It is not necessary to
16 stipulate a timing constraint. It may be possible to
17 stipulate a relocation constraint, or some other means.

18 Q Now, in page 10 of your
19 testimony, you make this statement, Mr. Bouckhout;

20 "Foothills is confident that the Alaska Highway
21 Pipeline Project is environmentally feasible.
22 Historical precedent can be found in the construc-
tion programs of both Westcoast and A.G.T.L. in
northern British Columbia and Alberta."

23 Have you found that, sir?

24 MR. BOUCKHOUT: Yes.

25 Q Surely, Mr. Bouckhout, the
26 matter of environmental feasibility must be determined on a

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 site specific basis?

2 A Again, I'm speaking on
3 very general terms and it could be directed at such matters
4 as terrain conditions, it's based on experience that has
5 been accrued by both Westcoast Transmission/Alberta Gas
6 Trunk Line in constructing pipelines and precisely the same
7 kind of the terrain, the same kinds of conditions that occur
8 along a good portion of our proposed route in Yukon.

9 Q Well, Mr. Bouckhout --

10 A -- this deals with perma-
11 frost, this deals with drainage, it deals with streams which
12 harbour fish populations, etc.

13 Q Mr. Bouckhout, you carried
14 the statement beyond that, though. You say "that Foothills
15 is confident that the Alaska Highway Pipeline Project is
16 environmentally feasible." You don't limit it to certain
17 disciplines.

18 A Confident, Mr. Marshall.

19 Q You make an all encompassing
20 statement.

21 A I am confident.

22 Q And then you base that
23 confidence on historical precedent related to construction
24 of Westcoast and A.G.T.L.?

25 A I use that as one example
26 upon which that confidence may be based.

1 Q Well, you don't site any
2 others. That's the only one you've given us in your
3 testimony.

4 A There are several other
5 examples, Mr. Marshall, if you care to have me explain some.

6 Q I'd like to deal with
7 what's in your testimony first, Mr. Bouckhout. I'll just put
8 it to you.

9 You simply can't extrapolate from
10 the experience of A.G.T.L. and Westcoast in British Columbia
11 to the Yukon.

12 A I think that's totally
13 incorrect, Mr. Marshall. You certainly can extrapolate from
14 previous experience. If you couldn't we wouldn't be getting
15 far.

16 Q Can you extrapolate to
17 the point of saying with confidence that because pipelines
18 have, in your judgement, been environmentally feasible in
19 Alberta and British Columbia, that they are necessarily
20 feasible in south Yukon.

21 A Again, Mr. Marshall, I
22 indicated to you that that's not the only reason I made that
23 statement.

24 Q Well, you offer it as
25 one of the reasons.

26 A I offered it as one of the

1 reasons.

2 Q I'm saying to you, Mr.
3 Bouckhout, that that's a reason without any foundation
4 whatsoever.

5 A I totally disagree.

6 Q I see nothing has
7 changed.

8 Can you give me any indication of
9 what environmental studies were done on either the systems
10 of A.G.T.L. or Westcoast which would enable you to determine
11 that those construction projects were environmentally
12 feasible, and hence reach the conclusion you have expressed
13 in your testimony?

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1 A I think in that respect we
2 happen to have on this panel a member of Westcoast Transmission
3 and has been for many, many years, perhaps he could speak to
4 that.

5 MR. LITTLEDALE: Would you repeat
6 that question Mr. Marshall?

7 Q I'll have to think about that
8 for a minute. Have you any idea of the extent of the environ-
9 mental studies that was done so as to enable the determination
10 to be made that instruction by either Westcoast or AGTL had
11 been environmentally feasible and hence used that to buttress
12 agrument that what proposed in the Yukon is going to be envi-
13 ronmentally feasible as well?

14 A Well, I'm not sure completely
15 that I understand the question, but I'll try and answer it the
16 way I heard it. Yes,^{if}/we are going to extend our lines, which
17 essentially what we've been doing for years, you know, either
18 by looping or extending into gas producing areas we under-
19 take an environmental study. We, at the moment I think pri-
20 marily we are consultants of Schultz & Associates, who we
21 utilize for this purpose. Now I'm not saying they're the only
22 ones, but we do undertake this kind of work and, in collabora-
23 tion with the Provinical Government Environmental Branch, we
24 determine whether the project is environmentally sound or not.

25 Q I'm going to move on to another
26 topic, Mr Bouckhout.

1 Also on Page 10 you make this state-
2 ment, "We do not presume to have all the answers to^{the} various
3 environmental concerns at this time." And Mr. Bouckhout, with
4 respect to that comment, I'm with you all the way.

5 MR, BOUCKHOUT Thank you, Mr. Marshall.

6 Q You go on to say "With a co-
7 ordinated effort involving Foothills, relevant government
8 agencies and the general public, we are convinced that the
9 environmental concerns posed by this project can be miti-
10 gated". Now, Mr Bouckhout, while your optimism may be laudible,
11 how can you be confident that the concerns can be mitigated
12 when you haven't yet identified all of the concerns?

13 A Mr. Marshall, we have identified
14 the concerns. We have identified the subject of specific con-
15 cerns, we have identified in many cases the area specific and
16 in some cases the site specific concerns. The kinds of studies
17 we're doing do in virtually every case, is to determine where
18 these concerns are relevant on a site specific, mile by mile,
19 site by site basis. I put it to you that no one has come up
20 and told me of any single concern we have not yet identified.

21 Q Well, Mr. Bouckhout, let's go
22 at it this way. Now you know that siltation is a concern to
23 fish.

24 A Absolutely.

25 Q Right. But you don't know in
26 which rivers or streams that you propose to cross^{you} are going to

have

1 /fish populations in proximity to the route at the time that
2 you propose to cross them, do you?

3 A That's exactly what I said,
4 Mr. Marshall, we don't have all of the answers. We have stud-
5 ies on roads right now that are doing that exact thing.

6 Q Well, Mr. Bouckhout, it's trite
7 to say that siltation is bad for fish, but surely until you
8 know whether you're going to have fish in proximity to your
9 proposed pipeline, they're going to be impacted by siltation,
10 you can't determine, you can't make an assessment as to whether
11 or not your project is environmentally feasible or it isn't.

12 A The acceptance, Mr. Marshall,
13 is based on what you can do about that situation. You can
14 relocate, you can put on timing constraints, you can put on
15 design constraints, you can put on construction procedure con-
16 straints. All of these things are available. We've talked
17 about these for years.

18 Q I see, so you're satisfied
19 with respect to the matter of siltation, as long as you know
20 siltation is a concern to fish, there's something you can do
21 to mitigate that and there's not going to be a fish population
22 that is seriously affected by siltation on this pipeline. Is
23 that what you're telling me?

24 A In terms-- I'm not saying no
25 fish will be affected. I've never said that and I never will.
26 I'm saying that no fish population will be decimated by this

1 pipeline.

2 Q Well, that's comforting, I'm
3 sure, Mr. Bouckhout.

4 Mr. Bouckhout, I couldn't find any-
5 thing in your filed evidence about monitoring and here I'm
6 having in mind long-term environmental monitoring. You're fami-
7 liar with the concept are you, Mr. Bouckhout?

8 A I am familiar with a concept
9 of monitoring, whether your concept and mine are the same, I
10 don't know.

11 Q Well, I'll put a definition to
12 you and you can tell me whether or not you think it's a reason-
13 able one.

14 I've had monitoring defined for me
15 this way. The long term observance and recording of environ-
16 mental parameters which enable one to assess changes in the
17 environment. Does that sound like a reasonable one?

18 A That sounds as good as many of
19 the other definitions as I've heard.

20 Q Fine, and you're aware, are you,
21 sir, that under the expanded pipeline guidelines of the Govern-
22 ment of Canada there is a requirement for such long-term moni-
23 toring to be carried out by pipeline applicants.

24 A I am sir.

25

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1 Q Would you agree with me,
2 sir, that to monitor effectively, it is necessary to have
3 several consecutive years of data in order to isolate cycles
4 of natural variability?

5 A Sir, biologists have been
6 attempting to do this for some decades. In many cases it
7 takes five, ten, in many cases after twenty, thirty years
8 of doing this you still have not isolated the parameters
9 that are necessary. Natural fluctuations in populations are
10 known in some populations and in others, it's impossible.

11 Q The more consecutive years
12 of data base, the better, though?

13 A That's right.

14 Q How many years of data
15 base does Foothills (Yukon) have in the south Yukon that is
16 directly applicable to the pipeline route.

17 A I really couldn't tell you
18 Mr. Marshall, it would depend on the element you're trying
19 to monitor, you monitor physical environmental parameters
20 such as drainage, such as vegetation and so on. You can
21 monitor biological parameters it would really depend on the
22 parameter and the types of locations.

23 Q Well, have you identified
24 those parameters that you wish to monitor. That you consider
25 its necessary to monitor in order to comply with that
26 guideline?

1 A In terms of specific --

2 MR. HOLLINGWORTH: Excuse me, Mr.
3 Marshall. It seems implicit in your questioning, that the
4 northern pipeline guidelines are applicable to this project.
5 Is that an assertion you plan to make or are making now?

6 MR. MARSHALL: Yes.

7 MR. HOLLINGWORTH: All right.

8 MR. BOUCKHOUT: I will
9 answer the question now, Mr. Marshall, but I think it is
10 necessary that you understand that these are guidelines,
11 they're not regulations, they're guidelines. I'm sure you
12 are aware of that.

13 MR. MARSHALL: Well, it's a
14 question of law as to what force they have, so I don't think
15 we need to debate what --

16 A Well I'm sure
17 ultimately someone will come up with the precise recommenda-
18 tions and regulations, ultimately.

19 Q Fine.

20 A Now, as I mentioned -- I am
21 sorry, I've forgotten your question now?

22 Q Well, I was wondering
23 whether Foothills had determined those environmental parameters
24 that it considered it ought to be monitoring on a long term
25 basis in order to meet the monitoring requirement in the
26 expanded pipeline guidelines?

10 I might add that I am certain
11 myself that Foothills has not been able, with the help of
12 it's consultants, to find all of the information, both
13 biological and physical that is available in this corridor.
14 I'm certain, and we're finding it all the time, that there is
15 much more available and this will all formulate part of the
16 input, which is necessary to determine where you can most
17 validly monitor it.

22 A That's right, Mr. Marshall.

26 A Since September of last

1 year.

2 Q Thank you, sir.

3 Back to page 10, sir, you make this
4 statement near the top

5 "Foothills is taking all the above factors into account
6 and sending it through, and is conducting a
7 comprehensive field study program of the area
8 through which the pipe will pass in order to
9 determine the need for and extent of necessary,
10 protection measures and relocation of the present
11 route. These studies will provide site specific
12 information for detailed project planning."

13 I was wondering, sir, if you could
14 tell us what Foothills is doing in this area?

15 A The studies which we have
16 undertaken, beginning in the Fall of last year, included
17 consideration of fall fisheries, migration and spawning,
18 fall waterfowl staging, these are all along the pipeline
19 route. Over wintering -- consideration of over wintering
20 populations of fish, ungulate surveys during the period to
21 determine habitat utilization patterns during the winter,
22 we have just, I believe, completed the spring migrations
23 surveys which have been very detailed. Surveys along the
24 entire alignment to determine the utilization of various open
25 bodies of water by waterfowl in the Spring. We are currently
26 undertaking a major spring fisheries migration and spawning
study which is currently underway with some twelve to fourteen
people in the field. We have two studies, one a summer
fisheries study, one a summer-fall mammal study program,

1 which will begin within two weeks. I think those are the
2 ones that have been finalized and are either on the boards
3 ready to go, completed, or underway. There are many others
4 which we have in our overall environmental program for the
5 summer, but I could discuss those with you if you want, but
6 I don't think you'd like to --

7 Q Well, sir, would it be
8 fair to say, you've listed those for which Foothills is
9 budgeted?

10 A No, the ones I've just
11 said are just completed, or are underway or have actually
12 finalized proposals and have the field teams ^{being} prepared to go
13 out into the field.

14 Q I see, when will that
15 level of research work be done?

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Littledale, Saker, Burrell, Bouckhout
Cr Ex by Marshall

1 A What level, Mr. Marshall?

2 Q The programs that you just
3 outlined, when will all of those be in the reports available?

4 A Reports on the Fall Fisheries
5 Program are in and available and have just been filed. Re-
6 ports on the Fall waterfowl program are in, available and have
7 been filed. Reports on the Winter Fisheries Studies and the
8 Winter Ungulate Studies have just been printed. They're off
9 the press now and should be available, depending on plane con-
10 nections, probably Monday or Tuesday and the others are under-
11 way.

12 Q And when do you anticipate they
13 will be available?

14 A The Report on the Spring Water-
15 falls Program I anticipate will be available in approximately,
16 depending on fast our biologist can write, a month. The Spring
17 Fisheries Program will not be completed. The actual field
18 work segment of it will not be completed until early June,
19 therefore that obviously won't be available for some time there-
20 after.

21 Q Do any of these studies that
22 you've just described to us relate to a Dempster or Klondike
23 Highway route?

24 A No, they do not.

25 Q I believe you mentioned, sir,
26 that there were proposals for further work to go on after the

1 completion of these programs you've just described?

2 A Not necessarily after com-
3 pletion, they could be undertaken in parallel.

4 Q I see. Do I take it that a
5 firm plan has been made, a firm decision has been reached to
6 proceed with some additional work or is this still a matter
7 being considered by Foothills?

8 A The status of the other work
9 is that they have been budgeted for, the budget has been
10 approved the final details of the various studies have not
11 been sorted out.

12 Q I see. You mention they've
13 been budgeting for-- how much has Foothills budgeted for this
14 additional work that you just mentioned?

15 A Approximately in the order of
16 three-quarters of a million dollars, half a million, three-
17 quarters of million, in that range. You say additional, I'm
18 not really sure what you mean by additional.

19 Q Well, sir, you described an
20 initial group of study work that was underway or had been
21 completed and the reports for which were being done and then
22 you talked about some other studies that Foothills was planning
23 to proceed with, either as soon as possible or when these other
24 studies were completed and it was that second group that I
25 was talking about.

26 A The second group includes such

1 things as archeological surveys, recreation surveys, follow-up
2 programs in the Fall and so on.

3 Q I see.

4 A It's difficult to give you a
5 precise dollar figure because it depends on the individual
6 proposals obviously.

7 Q I see. The budget figure that
8 you mentioned, did it relate to the second category?

9 A What I gave you is a budget
10 figure and, to make it very clear, I might say that for a field
11 study, this is not administration, the field studies exclusive-
12 ly, I have budgeted for the year 1977, approximately \$600,000.00
13 to \$700,000.00.

14 Q I see. Now, sir, does any of
15 the work for which you have budgeted relate to pipeline routes
16 along the Dempster/Klondike Highways?

17 A No, sir, it does not.

18 Q Thank you.

19 Now, Mr. Bouckhout, the project is
20 described as the Alaska Highway Project.

21 A That's right.

22 Q It is true, is it not, that
23 if you consider the right-of-way of this project in Canada, in
24 the Yukon and the adjoining area in Northeastern British Col-
25 umbia, that approximately 50 per cent of the total route di-
26 verges significantly from the highway.

1 A Two points on that, Mr.
2 Marshall. Firstly, I can only speak to the Yukon since the
3 Yukon alignment is the only one with which I'm familiar.

4 Secondly, you're using a term signifi-
5 cantly and I don't know what you mean by that.

6 Q I'll define it. One, the
7 divergence would be at least five miles removed from the High-
8 way or separated by some significant topographical barrier.

9 Two, the divergence would be at least
10 10 miles in length.

11 A Excuse me, Mr. Marshall, I'll
12 be right with you. I'm just looking for a document, Mr. Mar-
13 shall, which related to these kinds of things. I can't find
14 it but we can proceed irrespective.

15 Q Well, Mr. Bouckhout, what I
16 propose to do would be to put some information to you and I'll
17 give you the document, you probably have a copy of it as it's
18 been filed in the National Energy Board, and perhaps at a later
19 date you could put a response on the record as to whether or
20 not you accept the accuracy of this statement.

21 A I am aware of the document
22 you're referring to, Mr. Marshall, in fact I have responded to
23 that particular document already.

24 Q Well, I'll put the question and
25 you can give whatever response you think is appropriate.

26 A Fine.

1 MR. MARSHALL: Mr. Chairman, the document
2 that I'm taking this information from is some testimony filed
3 on behalf of Artic Gas in the National Energy Board, by
4 Doctors Banfield and Gossen. It was filed as Exhibit 10-AG-3-
5 188 and utilizing the criteria that I just read into the re-
6 cord , Dr. Gossen determined by taking the mileages from
7 the alignment sheets filed by Foothills, that between the
8 Alaskan-Yukon border and Sousa Creek in Alberta, there were
9 these divergences from the right-of-way of the Highway. The
10 first is Mile Post 47 to 59, the second Mile Post, 172 to Mile
11 Post 184, the third Mile Post 229 to 239, the next Mile Post
12 239 to 275, the next Mile Post 300 to Mile Post 330. So
13 all of those would be in the Yukon.

14 And then in the North-east corner of
15 B.C., the Westcoast system, the divergences from the Alaska
16 Highway would be Mile Post 1 to 58,--

17 MR. HOLLINGWORTH: Excuse me,
18 Mr. Marshall, when you say on the Westcoast system, are you
19 referring to the points past Mile 512 when the line has left
20 the Yukon for the last time?

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Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 MR. MARSHALL: This is the segment
2 of the express line, the 48-inch express line, that goes
3 from the B.C. - Yukon border through B. C.?

4 MR. HOLLINGWORTH: Not the part that
5 goes into British Columbia and comes back up into the Yukon.

6 MR. MARSHALL: Well, I am not
7 certain. Milepost 1 to milepost 58 on the Westcoast route.
8 Mr. Littledale --

9 MR. HOLLINGWORTH: Well sir, that
10 is obviously on the Westcoast system in British Columbia,
11 I just wonder if your Inquiry is prepared to listen to that
12 testimony since I understood this Inquiry related to the
13 Yukon portion. That's just an observation.

14 MR. CHAIRMAN: Mr. Marshall, do
15 you want to continue with that list. If so, perhaps we
16 should try and relate it to the terms of reference of this
17 Board.

18 MR. MARSHALL: I was specifically
19 interested in the section in the Yukon, and if Mr. Bouckhout
20 would be good enough to advise as to whether or not he
21 accepts that in the Yukon the right-of-way proposed by
22 Foothills does diverge from the Alaska Highway right-of-way
23 in the area as indicated. Did you wish to respond now, Mr.
24 Bouckhout?

25 MR. BOUCKHOUT: I can respond now,
26 Mr. Marshall. You have your document and I've just found

1 mine. As I say, I have responded to those precise locations.
2 If you wish to read your locations one by one, I can respond
3 to them one by one, relative to whether a) they are in
4 fact divergences which I would agree with, and b) in fact
5 whether they agree with the criteria as set up for a divergence.

6 Q Well, fine, sir, let's go
7 through them.

8 What about Milepost 47 to 59?

9 A That is a divergence. That
10 is the Pickhandle Lake area where we have in fact adopted
11 a realignment to create the divergence.

12 Q And that realignment takes
13 you over into the other side of a natural feature, a hill,
14 or mound.

15 A That's correct.

16 Q And do you have any
17 information about the sensitivity of that area for raptors?

18 A The indication in that
19 particular area was that the fairly steep face of the inter-
20 vening topography that you're speaking of, hill or mountain,
21 was potential raptor nesting habitat. What we've done is
22 taken the pipeline from that face and moved it to behind
23 that face. In other words, on the back slope, some distance
24 from it, which is by far a less disturbing area to be in if
25 in fact there are raptors on that slope, on that face.

26 Q You don't know now whether

Littledale, ~~Bouckhout~~, Burrell, Saker
Cr Ex by Mr. Marshall

1 there are, or there are not.

2 A Again, that is part of
3 the summer program. That's one of the ones that I indicated
4 to you that will be done within a couple of weeks, so it will
5 be done within a couple of weeks.

6 Q What about from Milepost
7 172 to 184?

8 A We can perhaps take 172 and
9 to 184 and 229 to 239, which I believe will be your next
10 one. We have assessed these within our own shop by our
11 alignment people, by our surveyors and so on. They have
12 indicated to me that neither of these alleged divergences
13 fulfill the criteria which you mentioned as the maximum
14 distance from the Highway in both instances is only about
15 four miles. It is still a divergence, granted. It doesn't
16 fulfill your criteria necessarily, but it is a divergence, I
17 will grant you that.

18 Q Of about four miles
19 from the Highway?

20 A That's correct.

21 Q And you covered then to
22 Milepost 239, have you?

23 A We, yes, we've covered
24 now 172 to 184 and 229 to 239. We find no particular
25 environmental concern in either of these divergences.

26 Q What about Milepost 239 to

Littledale, ~~Bouckhout~~, Burrell, Saker
Cr Ex by Mr. Marshall

1 275, which is as I understand it, 37 mile divergence in
2 the Ibex River area.

3 A That's right. That's a
4 very significant divergence. This is one we have spoken to
5 several times. This is the entire route where the pipeline
6 route diverges from the Highway at approximately the
7 Takhini River and rejoins the Highway just north of
8 Johnsons Crossing. This is one we have indicated that there
9 is concern about, we're very aware of the concern, and that
10 we are currently investigating potential re-routings in
11 this area. It happens to be an area where we have
12 Whitehorse in the centre, and we have several implications
13 and it will take some very judicious consideration in order
14 to find the most acceptable route in this particular area.

15 Q If my memory serves my
16 correct, Foothills was in the same position when it testified
17 before the National Energy Board here in Whitehorse at the
18 beginning of March.

19 A That's correct, Mr.
20 Marshall. This is not the sort of thing that you snap your
21 fingers and say that's going to be it.

22 Q You haven't made any
23 headway since then?

24 A We've made plenty of
25 headway, we haven't come to a decision. We'd be fools to
26 come to a decision without considering the implications.

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. Marshall

1 Q I see.

2 What about Milepost 300 to 330?

3 A Yes, that does fulfill your
4 criteria as a divergence. That happens to be in the
5 Squanga Lake area.

6 Q Thank you gentlemen, those
7 are all my questions.

8 MR. GOUDGE: Next on our order ,
9 sir, is Mr. Joe from the Council of Yukon Indians.

10 MR. CHAIRMAN: Mr. Joe?

11 MR. JOE: We have no questions.

12 MR. GOUDGE: Then, Mr. Chairman,
13 Mrs. Christensen, representing both the City of Whitehorse
14 and the Yukon Association of Municipalities, if she's here
15 or somebody representing either of those organizations, I
16 wonder if they have any questions.

17 I take it not, sir, and that would
18 move us to Mr. Morrison for the Chamber of Commerce. No
19 questions? Mr. Morrison is here and has indicated to
20 me sir by shaking his head that he has no questions.

21 Mr. Ellis for the Yukon Transporta-
22 tion Association, if he's here or someone representing the
23 Association, if they have any questions.

24 Then, sir, next on my list would be
25 Mr. MacKenzie, representing the Yukon Conservation Society.
26 He has no questions.

1 Next would be Mr. Horton for the
2 Yukon Territorial Government.

3 MR. HORTON: No questions of this
4 panel.

5 MR. GOUDGE: Then I have added to
6 my list sir, since the list I read to you this morning, Mr.
7 Ogilvie representing the Yukon Chamber of Mines, that
8 organization will be a formal intervenor before you if he
9 or someone from that organization is here and has any
10 questions. I take it not, sir.

11 That completes the list of formal
12 participants, besides ourselves. I wonder if I might pause,
13 sir, and ask if there are any questions from anyone else
14 present that they would wish to pose to this panel?

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Littledale, Bouckhout, Burrell, Saker.
Cr Ex by Mr. McCandless

1 MR. CHAIRMAN: Is there anyone in
2 the room who wishes to address a question to this panel?

3 MR. GOUDGE: This here is Mr.
4 McCandless. Perhaps, you might introduce yourself.

5 CROSS EXAMINATION BY MR. MCCANDLESS:

6 MR. MCCANDLESS: I am a director
7 of the Conservation Society. I am asking these questions
8 for my own benefit really. They can't be considered part of
9 the Conservation Society's policy. One of the things that
10 puzzles me about your application is that you have no
11 metering stations in the Yukon Territory. The last metering
12 station, I understand, is immediately on the American side
13 of the border. Could you explain why there is not a metering
14 station at the moment that your pipeline enters Canada?

15 I P. BURRELL: Mr. McCandless, yes, there
16 is a metering station in Alaska to measure the quantity of
17 gas which will be flowing into Canada, and then there is no
18 further requirement for metering of the mainline stream of
19 gas in Canada other than at the export points. There would
20 be a requirement to meter the gas at any of the locations
21 where there is a takeoff for a supply of gas to the communi-
22 ties. But as far as the metering for the mainline is concer-
23 ned, there would be no requirement other than to measure the
24 gas into the country and then out of the country under the
25 N.E.B. regulations and the F.P.C. regulations.

26 Q Then the National Energy
Board regulations say that they would, in effect, accept the

Littledale, Bouckhout, Burrell, Saker.
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1 American measurement of the quantity of gas that enters
2 Canada.

3 A I know that in an example
4 that I'm familiar with, and perhaps Mr. Littledale may have
5 some too, at Kingsgate for instance, there is a meter
6 station located there to measure gas into the United States
7 and there is no similar facility on the other side of the
8 border. There is a single meter station.

9 Q The 48-inch proposal is the
10 one that you are submitting to this Inquiry. I take it
11 it is the one that Foothills is proposing now, is it not?

12 A Yes sir, yes sir.

13 Q What is the optimum capacity
14 of a 48-inch pipeline under the pressure that you are advo-
15 cating, the optimum daily throughput through a 48-inch line?

16 A Our study show that we could
17 move a 3.4 billion cubic feet a day through the system by the
18 addition of compression to the system without a requirement
19 at looping.

20 Q But would it be economic
21 to operate it at some lower rate?

22 A It certainly would. As
23 far as the 2.4 level is concerned, it certainly is economic.
24 The 3.4 level, of course, is the ultimate volume which the
25 system could carry without looping.
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Littledale, Bouckhout, Burrell, Saker.
Cr Ex by Mr. McCandless.

1 Q But it would be economical
2 to operate it at 2.4?

3 A Yes sir.

4 Q Would it be economic at 2?

5 A At 2? Yes, it probably
6 would be. I'd have to look at the numbers, but certainly
7 we have done our work on a 2.4 level, and it's economic at
8 that level. Yes, sir.

9 MR. LITTLEDALE: Perhaps, could I
10 interject that the economics are somewhat fluid in this
11 business, because it depends very much on how your gas is
12 priced, and what in effect, your gas is worth. I think
13 you have probably seen in the papers lately there is some
14 talk of a further increase in gas prices.

15 Q In the United States?

16 A To the United States.

17 Let's just say increases. I'm talking generally. So what is
18 uneconomic today maybe economic tomorrow. In this area,
19 things are changing fairly rapidly. They weren't for many,
20 many years, but right now they are, and it would appear that
21 the price of gas does appear to be rising. So what was
22 uneconomic at one point in time may be economic tomorrow.
23 So it's very difficult to say this is economic or uneconomic
24 at this point in time.

25 Q So that if the gas price,
26 which I take it is in the order of \$1.40 something now, if

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. McCandless.

1 that is to rise substantially, say \$2.00 per M.C.F.,
2 then your line would be economic at some throughput less
3 than 2 billions cubic feet a day?

4 A In general terms, without
5 getting very specific, generally speaking, that sort of thing
6 applies that kind of rationale.

7 Q Well, why the 48-inch
8 instead of the 42-inch ?

9 MR. BURRELL: Why did we propose that?
10 You recall we did have a 42-inch system proposed and
11 certainly there were enquiries to us by the National Energy
12 Board and certainly there were indications in the United
13 States that they were looking for a system that perhaps
14 had more capability than what we are offering, and we took the
15 position if that is a desirable thing from their standpoint,
16 then certainly we would put it forward.

1 Q If the gas price is going to
2 go up and the U.S. President has seemed to indicate in his
3 energy policies that the price for energy must rise, wouldn't
4 it have been more feasible to build something smaller in the
5 order of a 30 inch or a 36 inch to get the gas down, because
6 you are moving something that is getting progressively more
7 expensive every year?

8 MR. LITTLEDALE: No, sir, it wouldn't
9 because the smaller the diameter of the pipe the more
10 compression you need to push that gas through the pipeline
11 and consequently the more fuel you consume.

12 Q Meanwhile your company does
13 not propose to own the gas that is entering into Canada. Is
14 it a matter of convention or--

15 MR. BURRELL: In Alberta, for
16 instance, Alberta Gas Trunk Line does not own the gas. We
17 are a carrier, a transportation system. The arrangement for
18 the purchase of the gas was between the end user, the
19 end distributing company and the producing company, and that
20 is not an uncommon arrangement.

21 Q What is the pressure that
22 you are intending to run the line at? The 48 inch line at
23 full capacity?

24 A The maximum operating pressure
25 is 1260 pounds per square inch.

26 Q Now in your documents which

1 you filed with the National Energy Board for the 42 inch
2 you estimate a rupture in 15 years as being most probable
3 by your calculations that the pipeline will tear in 15 years
4 somewhere on its length in the Yukon. Now what does changing
5 the proposal to a 48 inch, how does that effect that probability
6 factor?

7 MR. LITTLEDALE: That is a statistical
8 bit of information that you are quoting as to what the sort
9 of collective experience of pipelines of this type has been.
10 That is that 15 year figure. I don't know what you can say
11 about such statistics. I would say this that in the past
12 20 years, particularly the last ten years, a lot more is
13 known and has been done and improved in improving the integrity
14 of pipeline systems both in compressor stations, but
15 particularly in the metallurgy of the pipe itself. There
16 has been great improvement in this area.

17 So, whether that -- you can sort of take
18 those statistics and say somewhere in 15 years or once in
19 15 years is something that we should / ^{be saying} will happen or will
20 not happen. I don't know really how to answer this question
21 to you other than to say, look, somebody came up and said
22 what has been the collective experience of pipelines and
23 they said, well going back gathering this information, statistically
24 once in 15 years they have had this kind of a problem.

25 MR. BURRELL: Mr. McCandless, I
26 would say that one would not expect to have the frequency of

1 line breaks with a 48 inch to be any more often than you
2 would with a 42 inch that we propose.

3 Q How do you explain the
4 absence of contracts between gas producers in Prudhoe Bay
5 and gas purchasers in the U.S. mid-west? Why are we being
6 asked to consider a pipeline when we have no guarantee that
7 there is gas available and we have no guarantee that there is
8 a market for the gas?

9 MR. LITTLEDALE: I wouldn't say
10 that there is no market for the gas from anything I have
11 read, unless I have been reading the wrong information.

12 Q I read the newspapers too.

13 A Well then possibly having
14 read the same newspapers, I am told that there is quite a
15 shortage in the United States and they are quite willing to
16 sort of pick up gas wherever they can. So that aspect of
17 it it seems to me that there is obviously a market. I can't
18 be specific about the contracts because I am not in that end
19 of it, but I would have to say that if you want to sell the
20 commodity, obviously you didn't develop the gas fields and
21 oil fields to keep it in the ground. You are going to have
22 to sell it. In order to sell it, you are going to have to
23 move it to the market and the market is in the south.

24 Q I don't think my question
25 has been answered quite. I am not sure why Foothills has
26 proceeded with this application in the absence of contracts

1 because that seems to me, clearly the intent of the National
2 Energy Board Act that you must have contracts.

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Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. McCandless

1 MR. BURRELL: Actually, none of these
2 northern pipelines are really advanced without these contracts
3 in place, and it's recognized that it's a different, that in
4 previous cases, that the gas purchase contracts have been
5 in place. But, for various reasons, the signing of these
6 contracts have not come about, but as I understand it, the
7 Boards have moved forward because there is an indication of
8 a need for the natural gas to move and they've decided to
9 advance these hearings, knowing that the gas contracts have
10 not been negotiated, but knowing that there is in particular
11 the United States, a market for the gas.

12 . Knowing that these will have to be
13 settled and resolved before the pipeline actually goes
14 forward.

15 Q Do you know, for example, when
16 the State of Alaska will determine whether or not gas will
17 be available from Prudhoe Bay. Do you know the date at
18 which they will make that decision?

19 A I personally am not aware
20 of that. I know that there is talk of developing a unitization
21 plan, a field unitization plan and so on, but I'm not aware
22 of the timing on that.

23 Q How long do you expect
24 this pipeline to last?

25 A Well, --

26 Q Before it's abandoned as

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. McCandless

1 being too risky to operate any more?

2 A Well, I know, and maybe
3 Mr. Littledale can add to this, but I know of pipelines
4 in Alberta that have been in since 1912 and are still going
5 and are being used to transport gas. The period of time
6 of twenty-five years has been mentioned but this is basically
7 for financing purposes. They have assumed for financing
8 purposes, it would have a life of twenty-five years, but
9 in reality the length of a pipeline is much longer than that
10 given the protection measures, the coating and wrapping,
11 the cathodic protection measures, the inspection techniques
12 that are utilized and the way that it's maintained and
13 operated.

14 Perhaps Mr. Littledale might have
15 something to add to that?

16 MR. LITTLEDALE: By risk, did you
17 mean the deterioration of the system?

18 Q Yes, eventually it becomes
19 uneconomical to operate/^{it}because you're spending more on
20 repairs than you're earning in profits from the operation.

21 A Well, the pipeline itself,
22 if it is properly maintained and cathodically protected,
23 should not deteriorate. The compressors that are used to
24 compress the gas and drive it down the line are pieces of
25 machinery that have sort of a finite life, but a finite
26 life only in the sense that you have to change out certain

Littledale, Bouckhout, Burrell, Saker
Cr Ex by Mr. McCandless

1 components. You might wind up rebuilding the entire engine,
2 but there's nothing that I know of, other than sort of
3 obsolescence of parts and sort of -- you just can't buy
4 parts any more for them after forty years, at which time,
5 if you still have lots of gas, your pipeline should still be
6 in pretty good shape if you've looked after it. You would
7 as we do now, we change out some of our compression. We
8 find that year by year, improvements are made, new engines
9 come out with better fuel efficiencies, as the price of gas
10 goes up, it becomes economic to consider change-outs, let
11 alone anything else. So you might wind up ten years from
12 now finding it economical to change out your compression
13 and put in a new type of engine which is more economical.

14 . That's, in a sense, to update your
15 system.

16 Q But, if Alaska agrees, and
17 I doubt it very much if they will, but if they agree to
18 operate Prudhoe Bay the way your Company and Arctic Gas and
19 Exxon and all the rest seem to think it's going to be
20 operated, it's going to be exhausted in twenty years. At
21 the end of twenty years there may be no further gas to put
22 in that pipeline, so it'll be abandoned.

23 Now, what happens to the pipeline?
24 In your proposal -- Are you going to leave it there?

25 MR. BURRELL: I think Mr. Littledale
26 would like to add to this too, but certainly the potential

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Cr Ex by Mr. McCandless

1 in North Alaska is, for additional finds, as I understand, is
2 good, so that if the, if the Prudhoe Bay/^{field} was deleted and
3 the possibilities of additional gas finds in that area are
4 quite high so that perhaps the gas from the pipeline, into
5 the pipeline would not be coming totally from Prudhoe Bay
6 but could very well be coming from other gas supply sources
7 that have not as yet been discovered.

8 Maybe Mr. Littledale would like to
9 add to that?

10 MR. LITTLEDAL: No, that is fine.

11 Q Yes, that's so.

12 MR. BURRELL: Which has really been
13 the case in Alberta too in many areas that --

14 Q They may get off shore
15 drilling, they may open up a naval petroleum reserve, there
16 may be other gas, but it's a big 'if'. We're having something
17 laid in our soil here, and at the end of twenty years, what
18 happens to it if there is no more gas to put in it. Will
19 your Company remove it?

20 MR. BOUCKHOUT: In consideration
21 of abandonment, Mr. McCandless, the standard procedure that
22 we have talked about before would be that above ground
23 facilities would be removed but to remove a pipe which is
24 in the soil would cause probably much more difficulty and
25 much more problem than to simply leave it where it sits and
26 that, in very broad terms, would probably be a less, either

Littledale, Bouckhout, Burrell, Saker
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1 technology or considerations are advanced differently twenty
2 years hence than they are now would be a fairly standard
3 abandonment procedure.

4 You'll realize of course, that over
5 a much shorter time than that, there will have been a status
6 quo re-established, the right-of-way itself will be stable,
7 it will be in harmony with the pipe having been in the ground
8 then, therefore to disrupt that and an abandonment stage, in
9 general terms would simply just probably cause you more
10 difficulty that would be acceptable or necessary.

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Q In the permafrost areas in the first forty miles where you have discontinuous permafrost, if you abandon the pipe and leave the pipe in the ground, the interior of the pipe will no longer be chilled, because I take it the gas will be coming through chilled from the American side of the border. What would this do to the pipeline right-of-way if it's lying there inert and the contents are no longer chilled in a frozen area?

A The situation then, Mr. Marshall brought this up earlier this morning relative to permafrost, as you have correctly stated, our current plan is that the gas will be chilled up to the first compressor station which is about Milepost 40. It's coming in chilled from the last compressor station in Alaska. Now with respect to the consideration of running chilled gas as opposed to running warm gas, it again gets into the discussion that Mr. Marshall was involved in this morning, the selection of chilling point cut-off. The situation essentially is that in order to definitively establish necessary measures to confront the possible ramifications of cold gas in unfrozen soil as opposed to warm gas in frozen soil is a factor of very detailed geotechnical consideration. What you do is you evaluate your terrain conditions along the line essentially, and to look into factors such as the existence of permafrost or no permafrost

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1 and additionally, another very important factor is the nature
2 of the permafrost, whether it's high ice content or low ice
3 content. This has a considerable bearing on what a warm
4 line might do in permafrost areas.

5 Now, in terms of abandonment, and
6 you might want to ask a hydraulics engineer or something
7 about this to make sure I've got it right, but as I would
8 see it, what in effect would happen is that the pipe would
9 quite running, in other words no gas would flow through
10 the pipe, and the interior of the pipe and the pipe itself
11 would take up the ambient temperature of the surrounding
12 soil since you have essentially no input and no
13 output.

14
15 Q But, there's never been,
16 to your knowledge, a pipeline abandoned in frozen soil.

17 MR. LITTLEDALE: Yes, we abandoned
18 approximately 50 miles of 24-inch from Fort Nelson, east to
19 Yoyo, which goes through some areas of discontinuous
20 permafrost.

21 Q And were there any
22 buoyancy problems?

23 A None at all. When I say
24 none at all, to be perfectly accurate, is when you lay a
25 pipeline through that type of terrain which, for the most
26 part, is vastly different to what we're talking of, and much

It's just below the surface of the ground and you don't even know it's there.

The overall economics of your proposal has been, well it's before the National Energy Board. You're estimating your costs and your earnings and so on and so on.

Q We have this hearing, the environmental panel, which are advisory to the Government, which will act on the National Energy Board's recommendations. At what point do you say that we cannot afford to make the changes requested by the Government. Are you sticking to your National Energy Board cost figures? Can you alter it at all? Can you raise the cost if the Government tells you to? Or are you going to scream that it's uneconomic?

MR. BURRELL: As far as I see, we

1 feel that the estimates that we have right now before the
2 Energy Board are realistic.

3 What will happen, of course, when
4 the approval for the pipeline goes forward, we will go to
5 the financial houses and obtain funds and they will, in
6 actual fact, provide the funds to advance the project and
7 they'll do it on the basis that they will be able to recover
8 their money.

9 Now, we've done that, we've gone
10 to the financial houses and got -- we've got information
11 from them and certainly they have said to us that it's
12 financable. Now, if for some reason the costs of this
13 project went up tremendously, then of course the financability
14 of the project would have to be looked at again as it would
15 be as you move into the final financing stages. But as it
16 stands now, the information we have is that it's financable
17 and we don't see any particular problem and we feel that
18 our estimates of this project are reasonable.

19 Q So, if the National
20 Energy Board or the Cabinet was to ask Foothills, assuming
21 that they were given permission to build, to stick rigidly
22 to the Alaska Highway and not deviate through divergences
23 which were brought out earlier by Mr. Marshall, if the
24 Government requested you to stick closely to the Alaska
25 Highway, it would of necessity lengthen your proposal.
26 Would that have an adverse effect on the overall economies of your

1 proposal? Could you still build the line --

2 A It would certainly increase the length
3 and then you would have to look at the additional costs and look at
4 whether you could in fact deliver the gas into the market-
5 place, compared with alternative sources of supply. That's
6 really what you're competing against, and then having looked
7 at that, evaluate the economic feasibility of the project as
8 you would do with any project, really.

9 Q So, but you could conceivably
10 say to the Government, I'm sorry, but we can't afford to
11 stick close to the Highway, we have to follow these
12 divergences.

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26 (PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT)

1 MR. GOUDGE: Can we reconvene and
2 complete the cross examination of this panel?

3 MR. CHAIRMAN: Perhaps, Mr. Goudge,
4 you could speak initially to the sequence we are going to
5 follow tomorrow.

6 MR. GOUDGE: There are one or two
7 things, sir, that I would like to say right away. First of
8 all, it has been brought to my attention that I perhaps
9 didn't make clear, or as clear as I should have this
10 morning that in addition to these formal hearings, we will
11 be having in Whitehorse, the more informal community hearings
12 that will enable individuals to come forward with submissions
13 to your Board without all the trappings that we have here
14 today of lawyers and so on.

15 Those informal community hearings
16 will commence here in Whitehorse a week from this evening.
17 There will be further informal hearings in Whitehorse when
18 your Board returns from visits to communities elsewhere in
19 Yukon. Those informal hearings will be along about the
20 end of June and early July and the dates and places for those
21 hearings here in Whitehorse will be obviously made public
22 in so far as we can do so.

23 The second matter that I would like
24 to indicate is the transcript of evidence in chief to be
25 delivered by the next two Foothills panels have been filed with
26 us and are available for those participants who haven't yet

1 picked them up and if they wish to do so at the end of
2 today, they should see Mr. Roland.

3 The third thing, is sir, that I
4 spoke with counsel at the break and we have agreed, subject
5 to what the Board may so to proceed in the order that had
6 originally been anticipated.

7 Foothills will be presenting its
8 second panel first thing in the morning. That will be their
9 major socio-economic panel and they will follow that with
10 their panel on their northern training program.

11 We would anticipate commencing the
12 second panel at ten o'clock tomorrow morning.

13 Sir, following that, if I may, I
14 have one or two questions for the witness.

15 CROSS EXAMINATION BY MR. GOUDGE:

16 Q Let me begin, if I may, Mr.
17 Burrell with a subject that Mr. McCandless canvassed a little
18 with you.

19 If you assume existing reserves in
20 Prudhoe Bay to be the reserves that the line you propose
21 will transport, and if you assume no further discoveries,
22 what would the life of your line be?

23 MR. BURRELL: I would have to make
24 a calculation, but it is-- there is presently 26, as I recall
25 26 trillion cubic feet of recoverable gas reserves in Prudhoe
26 Bay and we intend to withdraw them at the rate of 2.4 billion

1 cubic feet per day. It is then a case of dividing 26 trillion
2 by the 2.4 billion a day, which I can do and have that number
3 for you in a minute.

4 Q I just wonder if you have a
5 rough number? Is it in the order of 20 years, something like
6 that?

7 MR. LITTLEDALE: Quickly, mentally,
8 I would say it is something less than a trillion a year
9 you would be pulling down, wouldn't you? It is a matter of a
10 trillion a year so you would be looking at 26
11 or 27 years.

12 Q It is 26 to 27 years approximately

13 A Yes.

14 Q Your anticipation clearly
15 is that there will be further discoveries in the north
16 slope of Alaska that will will permit you to prolong the
17 useable life of your pipeline, is that right?

18 MR. BURRELL: It is our understanding
19 that there is good potential for additional discoveries in
20 that area, yes.

21 Q When you say that, you speak
22 primarily of the immediate off shore Prudhoe Bay or are you
23 including Naval Petroleum Reserve Number 4?

24

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26

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Crex by Mr. Goudge.

1 A Nothing in my mind spe-
2 cifically other than the knowledge that the area adjacent to
3 Prudhoe Bay has potential for additional gas supply. As far
4 as what exactly that potential is, I don't have a number with
5 me but in discussions with people within the company who are
6 familiar with gas reserves and potential for gas reserves,
7 they have told me that there is considerable potential for
8 gas in the northern, additional gas supply to Prudhoe Bay
9 in the northern part of Alaska.

10 Q And is there sufficient
11 prospect of additional gas, Mr. Burrell, that there is a like-
12 lihood that the main line you propose will be looped at some
13 stage in the future?

14 A That's a difficult thing to
15 answer. As is contemplated now, there would be no looping
16 at the line. Certainly if there was additional gas reserves
17 found to the point which would justify sufficient throughput
18 to build the looping, then yes, the probability of looping
19 would be there.

20 Q But as far as you are
21 aware, there is no prospect now of the line being looped?

22 A Our proposal does not
23 envision the looping of the pipeline.

24 Q At any time in the future.

25 A Well, you can't say at any
26 time in the future. I think, as I say, if the reserves,

1 additions are sufficient that would fill this pipeline
2 and then could justify additional throughput beyond the
3 capabilities of this pipeline, then looping is a possibility.

4 Q And is it fair to say that
5 based on experience elsewhere, mainline transmission systems
6 of natural gas invariably end up being looped?

7 A Yes I think that's fair.

8 Q And the looping of the line
9 simply means, to oversimplify it, adding a second main
10 transmission line.

11 A In segments, yes.

12 Q Now in examining your route
13 as proposed, are there any parts of it in which the 120-foot
14 right-of-way you propose would not be able to contain a
15 second mainline?

16 A Perhaps Mr. Saker might
17 answer that.

18 MR. SAKER: Again if it were an
19 area that there wasn't room, also quite likely it would be
20 an area that we wouldn't loop. We would perhaps have to have
21 a diversion, a further diversion if it was necessary.

22 Q Mr. Saker, let me raise
23 with you the one area that appeared to me from your slides
24 to be a likely area and that's the area at the tip of Kluane
25 Lake where it seems to me it looks difficult, to put
26 it mildly, to put a single line. Would it be possible with

Littledale, Bouckhout, Burrell, Saker.

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1 your right-of-way there to add a second transmission line
2 if looping should be necessary?

3 A I don't thing that I am in
4 a position to give you a real honest answer on that. Mr.
5 Littledale has covered these loops through the fine paths,
6 perhaps he can give us an answer.

7 Q Mr. Littledale, do you have
8 any comments on that?

9 MR. LITTLEDALE: Yes, Mr. Goudge, I'd say
10 that it would appear just from the times I've been up there
11 and had a look at it, which is several, it would be certainly
12 tight. But however, when you loop, you are perhaps envisa-
13 ging a sort of a second continuous line all the way down.
14 Now looping is something that you are doing to increase
15 the capacity of your line and it is not a continuous line
16 paralleling. That's when you run two separate lines. That is
17 what you're looking at when you are saying if you found
18 more gas, would you loop the line? And you say yes. Well then
19 how much more gas and how much more looping. So if you found
20 a little more gas, you might wind up with 200 miles of loop
21 and it may be conceivable that you would never have to loop
22 the Kluane Lake area, you see. So if it was so tight, you
23 could, you know, looping and horsepower are somewhat inter-
24 changeable. And if you found it so tight and so difficult
25 you might want to make up with compression rather than with
26 looping, if it was that kind of a problem.

1 Q Dealing with that same
2 portion of the line, given that I think you acknowledged
3 that it's a tight fit, was any consideration given for that
4 reason or because there are communities on the same side of
5 Kluane Lake, to running your mainline on the other side of
6 Kluane Lake?

7 MR. BOUCKHOUT: Yes, Mr. Goudge, considera-
8 tion was given. We in fact, looked at two other options.
9 We looked at an option, as you have mentioned which would go
10 on the other side of the lake entirely, both our geotechnical
11 specialist as well as our terrain people and some of the
12 environmental people looked at this option from a technical
13 point point of view. In other words, from a construction
14 and a geotechnical point of view, and so on. It presents
15 very great difficulties, it does present^{you} with two crossings
16 of arms of Kluane Lake, the north end. It presents you with
17 unstable fan slopes apparently. Now I'm speaking from
18 recollection. So there are very significant difficulties
19 with the line on the other side. We also investigated the
20 possibility of crossing the lake itself. In other words,
21 we sounded the lake, crossing the lake to avoid what has been
22 considered as the tight spot which is Sheep Mountain
23 essentially, right at the toe of the lake. The configuration
24 of the lake bed is such that it also presents quite significant
25 construction difficulties.
26

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1 Q Let me ask you about the
2 first of those two options, Mr. Bouckhout, crossing on the
3 other side of the lake entirely. Are you telling me that it
4 it feasible but much more costly?

5 A I wouldn't want to go that
6 far, Mr. Goudge, I'm not versed enough in these matters to
7 be able to give you a definitive answer to that question.

8 Q Mr. Saker, can you help
9 me on that?

10 MR. SAKER: To be honest, no, because
11 I haven't flown the other side to have a good look at it
12 myself, personally.

13 Q Mr. Littledale, you look
14 like you are going to help me.

15 MR. LITTLEDALE: I can say that having
16 flown all around it, you can say, yes I can say it's feasible,
17 it's feasible to lay it on top of the mountains, but it is
18 more costly, you know, it definitely is more costly. Now
19 there is no question about it. To bring it down the other
20 side creates some real problems, all which result in con-
21 siderable additional costs.

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1 Q I don't suppose you have
2 a ball park figure on that additional cost?

3 A No, I don't have a ball
4 park figure, but I can tell you that it is substantial.

5 MR. BURRELL: Mr. Goudge, the
6 people that were involved for Foothills on this reconnaissance
7 are not on this panel, but it was looked at by representatives
8 or by Foothills people and the information is available on
9 it, it's just that it isn't available through this panel
10 at this point in time.

11 Q Now, in viewing an
12 addition with other routes that you may have studied, or
13 other options that you may have studied, did you at any
14 time look at the option that is known as the Tintina Trench
15 option? By that I mean the route that would enter Yukon at
16 the Tintina Trench/Alaska border, and run the length of the
17 Tintina Trench?

18 A It seems that the members of the
19 panel here are not aware of that, but it's possible that
20 other members of the construction department and routing
21 department may have had a look at that from the topography
22 standpoint. I can't really totally comment on that.

23 MR. LITTLEDALE: Mr. Goudge, if I
24 may add. The last time I was down in Ottawa, the NEB
25 started to express interest in some of these alternate
26 routes, this being one of them, and they expressed interest

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1 and said would you look at this and would you look at that
2 and I think Mr. Hollingworth made some comment on this. But
3 I personally have not been involved in these, and
4 examination of alternate routes such as what you are mention-
5 ing in the overall, I would think have to be fairly recent,
6 because I'm not aware of it.

7 Q I take it then that none
8 of you are aware of any studies that have been done with
9 that particular route, by your Company.

10 MR. HOLLINGWORTH: I've advised the
11 Commission earlier today on several occasions that there is
12 one study and it's been filed.

13 MR. GOUDGE: I take it, Mr. Hollingworth,
14 that's the only study?

15 MR. HOLLINGWORTH: To the best of
16 information I believe Mr. Goudge, that that was the only
17 study.

18 MR. GOUDGE: On routes other than the
19 routes that you have applied for?

20 MR. HOLLINGWORTH: That's correct.

21 MR. GOUDGE: Now, before I leave the
22 Kluane Lake tight spot, if I could use that phrase, Mr. Saker,
23 is the contemplation to blast there in order to put the
24 line in the ground?

25 MR. SAKER: If it's necessary, but
26 there's now heavy enough equipment and if this rock is

1 rippable, it will be ripped.

2 Q I'm sorry, I didn't
3 understand?

4 A If the rock can be ripped,
5 it will be rippable -- if it's rippable, it will be ripped.
6 We have big enough equipment and the techniques and the
7 knowledge now that we are ripping rock up with machines that
8 ten years ago was not, it was drilled and blasted. So we
9 would keep the drilling and blasting to a minimum.

10 Q So I take it you have
11 not done the geological studies to determine whether you
12 can rip or need to blast?

13 A We have geotechnical people
14 that will provide us with that information.

15 Q Mr. Bouckhout, you have
16 indicated to us that there have been a number of changes
17 in your route already to take account of matters that have
18 come up in your examinations and investigations of the route,
19 in particular the Pickhandle Lake area was one example you
20 recited to us. Is that correct?

21 MR. BOUCKHOUT: That is correct.

22 Q And could you tell us
23 why the route was changed there very quickly.

24 A It was changed there on
25 the advice of both the biological consultants and the
26 land use aesthetics consultants. We indicated that given

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1 that particular location, given the potential for raptor
2 nesting on the slope, the significance of delay complex,
3 the aesthetic considerations with respect to the Highway,
4 that a preferrable route would be to go behind the local
5 height of land as opposed to in front of it, yes.

6 Q And you mentioned in
7 answer to Mr. Marshall, but you're contemplating some change
8 in the Johnsons Crossing area, is that right?

9 A What I mentioned to Mr.
10 Marshall was something we have discussed several times and
11 that is the entire Whitehorse alignment from the point where
12 it diverges from the Highway alignment at the Takhini
13 River to a point where it rejoins near Johnsons Crossing.
14 That's -- although we still are basing our application on
15 a current route, the significant concerns in the area
16 relative to the location of that particular route have led
17 us into very serious consideration for an alternate route
18 which would take us between those two points. The number
19 of considerations that are involved in this particular
20 area, especially because of the location of Whitehorse, and
21 other socio-economic considerations in fact, makes it
22 virtually impossible in any very short order to come to
23 grips with choosing one particular other option -- in fact
24 we are looking at two other options.

25 Q Can you briefly describe
26 them for me?

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1 A One of the options would
2 cross the Takhini at the existing crossing, it would then
3 diverge back up to the Alaska Highway, now these are strictly
4 options of course. It would generally follow the highway
5 to a point somewhat, I'm going to say north but I'm not
6 sure, it's north of Porter Creek. I can't give you an
7 exact distance from the subdivision of Porter Creek. It
8 would cross the Yukon River at that point --

9 Q So, it would go north of
10 the City?

11 A Yes. It would cross the
12 Yukon River at that point and then it would follow a
13 direction on the, I guess it would be the east side of
14 Canyon Mountain, behind Cantlie Lake, in the Cantlie Lake
15 area, in that valley behind the mountain. That's one of
16 the other options we have considered.

17 Another option would be a possible
18 route which would be somewhat similar to the first, but
19 come down before the crossing, in other words,
20 before you cross the Yukon River at the second crossing, it
21 would describe a more southward run and back toward the
22 original at another point.

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1 Q Are there any other portions
2 of the route where there are, if I can call it this, relatively
3 major changes in the route being contemplated?

4 A None that I am aware of.

5 Q It is fair to say though that
6 as a result of the investigations that you are conducting,
7 the regulatory processess and the public input you seek, the
8 line, if it is unlimately laid, may not follow the route that
9 you have presently applied for?

10 A That is certainly the case
11 in conventional pipelining that you maintain a flexibility.
12 I don't foresee the significant possibility that there would be
13 any major relocations necessary, certainly on very small
14 scale basis there could very well, and there will very well
15 be very site specific refinements to confront such things as
16 perhaps pockets of permafrost, these kinds of things could
17 be avoided and would be avoided. The biological studies
18 which are going on now could, such as we were discussing with
19 Mr. Marshall this morning, the fish spawning beds could be
20 avoided by designating a new river crossing these kinds of
21 things.

22 I think in terms of a very major
23 relocation, the route described in the area of Whitehorse is
24 probably the only one where we would create a significant
25 change.

26 Q Now, I take it, Mr. Burrell,

1 one of the corporate policies of Foothills is to hold out
2 the possibility of gas supplied to local communities, is that
3 the case?

4 MR. BURRELL: Yes.

5 Q And that would entail the
6 building of laterals to a certain number of communities in
7 Yukon?

8 A Yes.

9 Q And it would be Foothills (Yukon)
10 that would engage in the building of those laterals?

11 A As we proposed it, we have
12 indicated that we would make--- are in the process of having
13 an arrangement made whereby a gas supply in Alberta would be
14 made available at the main line. As we have envisioned it,
15 the laterals would be constructed by the distribution company,
16 likely the company that builds the distribution system.

17 Q I see, so Foothills (Yukon) does
18 not contemplate getting into the business of building laterals?

19 A Not as we have put it forward
20 presently, no that is true.

21 Q Now, if ---

22 A Let me add to that, if I may.

23 We have taken the position that we feel that the supply of --
24 the opportunity or the distribution of natural gas within
25 a community is -- offers a good business opportunity to a local
26 business or perhaps to a municipality. We feel that would be

1 a proper way for the gas to be distributed within a community,
2 but we have also stated that if for some reason a company
3 did not come forward or a municipality would not provide the
4 gas and the community desired the gas then Foothills would go
5 ahead and distribute it. Our first preference is to have a
6 local business do it or a municipality.

7 Q Now, if and when that system
8 develops, gas then would be consumable and would be consumed in
9 the local communities and for security of the line, the main
10 line, I take it then becomes a matter of some concern to
11 local consumers since they depend on it for their supplies of
12 gas, is that a fair statement?

13 A They would get their supply
14 from the mainline, certainly.

15 Q Interruption of service in
16 the mainline becomes an interruption of service along the
17 distribution system?

18 A That is true, but I think that
19 you have to consider the frequency which that might occur and
20 also the fact that if a cause to shut the line down occurred
21 in Alaska, say, for instance, there is enough line pack in the
22 line to feed the communities for many days and perhaps months.

23 Q Well is it your contemplation,
24 Mr. Burrell, in that eventuality the Yukon communities would
25 have preference in consumption to the communities downstream?

26 A It seems to me that you would

1 close the valves off and -- you may sectionize the line and
2 provide gas to the communities. Now you would have to
3 work the situation out and see what arrangement you could
4 make but certainly I can envision the supply of natural gas
5 to the Yukon communities being put in jeopardy.

6 Q Mr. Burrell, isn't it fair
7 to say though that there are a variety of other communities
8 that will depend on that line pack gas as well?

9 A Yes, but you must appreciate
10 too that there are also other sources of supply that would be
11 available to these communities. You look at the overall market
12 and you have this interruptible load, you have storage facilities.
13 If such a thing happened you would look at the overall situation
14 and work out an arrangement which would be suitable to all
15 parties concerned, but I have to admit that on the other market
16 areas -- in the other market areas you have -- you do have --
17 storage facilities are available and other sources of supply
18 which you can use, whereas in the Yukon situation they would
19 rely basically on what is in the pipeline.

20 Q You are not contemplating
21 storage facilities in Yukon?

22 A No.

23 Q You are relying on line pack
24 gas in the event of an interruption of service?

25 A We are not contemplating
26 storage facilities in the Yukon, no.

1 Q You are relying on gas already
2 in the line to service the communities ?

3 A Yes sir.

4 Q And an arrangement, I take it,
5 would have to be worked out to ensure that?

6 A I think you would have to look
7 at the frequency that would occur and it isn't something that
8 you would have to be-- that would occur very frequently, but
9 certainly the arrangement would have to be there to ensure
10 delivery of gas to the Yukon communities. As I said, you
11 look at what supply sources you have available, your storage,
12 interruptible loads and other market areas and so on.

13 Q Now in terms of interruptions
14 that might effect the gas supply to local communities in
15 Yukon, it is true to say, I take it, that the line as it runs
16 through Alaska has some seismic risk to it, is that correct?

17 MR. LITTLEDALE: That is correct.

18 Q And indeed in its route as
19 you propose it across the Yukon, it traverses some fault
20 zones, isn't that true?

21 A I --

22 Q Particularly in the Kluane
23 Lake area?

24 Q I would say generally I
25 understand that to be the case though I am not the expert in
26 that field.

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1 Q And you might put in that
2 category the crossing of the braided streams, for example
3 the Slims River area, that creates some risk of interruption
4 of service.

5 A Well, that's true, Mr.
6 Goudge, however, our people our experts working on
7 this problem and have done a considerable amount of work
8 in coming up with a design to absolutely minimize this risk.

9 Q You'd agree with me
10 though, Mr. Littleddale, wouldn't you, that neither your
11 experience in B. C. nor your experience in Alberta is perhaps
12 relevant insofar as dealing with the fault zones I've
13 spoken about and the braided streams I've spoken about are
14 concerned. Neither of those kinds of risks are risks you've
15 dealt with in B. C. or Alberta?

16 A Well, I don't really
17 know, Mr. Goudge. I understand somebody was, came up,
18 some group of scientists and said the Vancouver area is
19 a high seismic ^{area} and there are certainly pipelines going
20 through it. When you say you haven't dealt with it, well,
21 it exists down in that area, apparently, according to the
22 finding of scientists.

23 MR. BURPELL: It's my understanding too
24 that there design features that are available or will be
25 utilized in a seismic area, a fault area.

26 I can't elaborate on the details

1 of those, but I know it's a matter that has been studied
2 and there has been designs brought forward for such a
3 situation as is done in all design cases really.

4 MR. LITTLEDALE: Can I just elaborate on
5 that?

6 Q By all means.

7 A Perhaps, we should
8 consider a senario here, and say alright, let's go along
9 with your line of questioning and let us assume that the
10 line did rupture in a high seismic area. Is that really
11 what you're getting at?

12 Q Yes, or the braided
13 stream problem. One or the other.

14 A All right. Now the
15 question then comes up as to how long does it take to
16 restore service?

17 We have been examining this type
18 of probability, not only in the high seismic areas, but in
19 other areas including major river crossings. So, I have
20 looked at the Kluane Lake area, and I'd have to say that
21 you're looking at the very worst at just a matter of days,
22 because, by this, at the very most, by this I'm not saying
23 that I'd have the line, sort of, back in service as a
24 complete tube, but I certainly could build a bypass around
25 the line very quickly and have the line back in service, but
26 not to full capacity, in very short order.

1 We have had such problems, and we
2 have done such things.

3 Q How many days, Mr.
4 Littledale, could you give me --

5 A How many days? Less than
6 a week.

7 Q 'Less than a week.

8 A My plan would be to
9 carry a fair amount of 24-inch pipe, as emergency pipe, for
10 such a purpose which could be installed to restore service
11 or partial service and get the line flowing and you could
12 put in several hundred feet, in fact several thousand feet,
13 and sort of really come up almost to your full capacity.
14 Now you know, we'd have to get into engineering numbers to
15 figure this out, but then you would go in a muck out and
16 clean up the area where the line broke, with this bypass
17 around this area, and then repair your line and then put it
18 back in service in a controlled fashion, you see.

19 Now, I have been involved with
20 such a problem as you are talking about, not too many years
21 ago, at Hudson Hope where we actually had a line break and
22 we kept Hudson Hope going on line pack for, oh, it was
23 getting close to two days, and these things can happen and
24 these communities that we are talking about, you know
25 when you are talking about the 48-inch line and you're
26 talking about the line pack and relative to the amount of

1 gas in the line, they are not really that significant in
2 the amount of gas that they would consume. Your main
3 concern in these cases is domestic.

4 It is not industrial, because
5 usually your industrial facilities you set up with alternate
6 sources of fuel in case of such an emergency and your
7 contracts are written up that interruption of service you
8 go on to something else, oil, whatever.

9 So what your real concern is
10 keeping people's furnaces going and the stoves going so
11 that they can be comfortable and can cook and the schools
12 are warm and so on. In aggregate this does not really take
13 that much gas. When you're talking of the size of
14 communities, we're talking along in the Yukon, including
15 Whitehorse.

16 Q That's so though only if
17 an arrangement is made that those communities have first
18 call on the line pack, yes.

19 MR. BURRELL: I don't envision
20 any difficulty in that at all.

21 MR. LITTLEDALE: I don't see how
22 it could be any other way, Mr. Goudge.

23 Q Now, in terms of this
24 week you're talking about, Mr. Littledale, that, I take it
25 you're talking there about repair conditions other than
26 the sixty below winter conditions. You wouldn't envisage

1 that kind of repair, in that kind of time, in that kind of
2 temperature?

3 A Well, I don't know about
4 sixty below --

5 Q I'm not sure whether that's
6 Farenheit or Celsius, but it's really cold anyway.

7 A --- repairs at 35 to 40
8 below Farenheit, we're repaired a line of 24-inch
9 diameter.

10 Q Sorry, let me ask you
11 this. In addition, doesn't it require then that to speak
12 of the kind of contingency scheme you are contemplating
13 and O & M capability that has in the area 24-inch line
14 and crews on call virtually at the ready, perform that kind
15 of service?

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1 A That's what we have now
2 Mr. Goudge.

3 Q And that's what you would
4 contemplate for your O & M facilities in the territories?

5 A It is our responsibility.
6 Once we've put in the pipeline, its continuity of service
7 is our number one prime responsibility.

8 Q Now, in addition to repair
9 facilities, will your O & M capabilities have any kind of
10 warning systems to take into account ruptures that appear
11 imminent due to braided stream bed changes, that kind of thing,
12 or are you going to rely entirely on aerial inspection?

13 A Well, we would rely on
14 aerial inspection, we would also at certain times and
15 certain places actually have people go up and walk the line.
16 In addition, of course, we would be pressure-monitoring.
17 You see, so many things, you know, you can look for and
18 monitor and you can have all kinds of concern about the
19 seismic area and then some bulldozer operator down in B.C.,
20 with a ripper on it breaks your pipe, and this never does
21 happen. So you have got to provide surveillance and be
22 prepared to move on any part of the system.

23 Q Dealing with your surveil-
24 lance, aircraft inspection is clearly a major part of it,
25 that's correct, is it not?
26

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1 A Well aircraft inspection
2 is a major part of it. From aircraft inspection you can
3 see certain things developing, sort of slides developing.
4 You can see erosion starting to take place, this kind of
5 thing. Or you can even see perhaps some other construction
6 group working toward your pipeline, you land and you say
7 hey, before you get there, be careful, there's a high
8 pressure gas pipeline. This kind of thing. Yes. It's
9 basic.

10 Q Is your aircraft inspection
11 going to be done in-house, or is it going to be contracted
12 out?

13 A We are generally looking
14 at contracting it out. But it would be contracted out on a
15 long term basis. Probably annually.

16 Q Yes sir. Are there any
17 other parts of your operation and maintenance capability
18 that will be contracted out, or will the rest be contained
19 within the employment figures that are in your application?

20 A No. What we would do, is
21 we would have what we consider sufficient in-house facilities
22 to take care of these kind of problems. However, if we
23 had a major problem, we would go and get what we needed
24 wherever we could get it. We now keep a list in track of
25 contractors in the area, equipment in the area, and so on.
26 So we use this as sort of supplementary equipment to our own.

1 We say okay, we if we have a problem and we don't have
2 enough equipment, or our equipment is not on site, we are
3 going to rent the equipment we can to start the work going.
4 In this sense we would have some contracting also.

5 Q That would be ad hoc
6 contracting, if I can put that way. What I'm really interes-
7 ted in whether you would have any regular O & M operations
8 being carried out on a contract basis?

9 A It is not our intention to
10 have O & M done on a contract basis, on a regular basis. No.

11 Q Apart from airplane sur-
12 veillance.

13 A That kind of work, we feel
14 would be done by our own people because it would mean running
15 heavy equipment over the pipeline and we would rather do it
16 with our own people who would realize the dangers of what
17 they are doing, our own trained people . We really don't
18 feel that's a good thing to contract out.

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1 Q Now let me if I may move to
2 other matters of construction perhaps. Mr. Saker, no doubt in
3 the construction process gravel is a matter that will have to
4 be addressed in some detail, is that so?

5 MR. SAKER: We have requirements
6 right along the right-of-way, yes.

7 Q And gravel is a substance that
8 is used by many other persons, groups, corporations in the
9 Yukon?

10 A Yes, sir.

11 Q Have you done studies as to
12 the available sources of gravel and what your demands will do
13 by way of placing stress on them as far as alternate users
14 are concerned?

15 A We have had consultants do
16 this for us, yes.

17 MR. GOUDGE: I take it Mr. Hollingworth
18 those studies are available?

19 MR. HOLLINGWORTH: I believe so,
20 yes Mr. Goudge.

21 MR. GOUDGE: Well perhaps I can
22 speak to you about that at the break.

23 MR. HOLLINGWORTH: I don't recall
24 a specific one but I will check on it.

25 MR. GOUDGE: In addition, Mr. Saker,
26 or any other members of the panel, I take it I am correct in

1 this, that the line, once in place as you propose it, is going to
2 be powered by gas, gas bled off the line?

3 MR. BURRELL: To drive the compressors?

4 Q Yes.

5 A Yes the proposal we have is
6 that turbines, gas turbines will be used.

7 Q Now is there any possibility
8 that those compressor stations could be driven by hydro-electric
9 power?

10 A The possibility exists if
11 there is a reasonable supply of -- if there is a supply of
12 hydro power available to do the job.

13 Q If there were such a supply
14 would you use it?

15 A I think we would have -- it
16 would depend upon -- under what arrangements it could be
17 obtained and under what timeframe it could be obtained.

18 Q You mean by arrangement,
19 price I take it?

20 A Yes.

21 Q And what do you mean by
22 timeframe, how does that effect your ability to use it?

23 A Well, first of all if we are
24 proposing to bring the pipeline on stream and first deliveries
25 in late 1981, of course, if there wasn't power available
26 then to drive the motors then of course, we would have to use

1 turbines. If the power was available of course, then we
2 would consider the use of electric motor drive. This matter
3 of electric motor drive has been a matter of discussion and
4 Mr. Blair in his evidence before the National Energy Board
5 has said that, and he will speak further to this when he
6 comes-- when he appears before this Inquiry, but has said that
7 if the situation was right, which means it was a good business
8 venture, the availability of power was there and the price was
9 right that we would consider electric motor drive. We may
10 even consider the possibility of building in provisions within
11 our design to accommodate electric motor drive at a later
12 date if the power was available and the price was right and
13 so on. But Mr. Blair will talk further to that when he
14 appears.

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1 Q In addition, when you
2 were speaking this morning about your construction schedule
3 you contemplated that, I think as you said, beginning to
4 lay pipe in 1979 and that was based on permits being granted
5 in early '78. Is that so, Mr. Saker?

6 MR. SAKER: That's right.

7 Q I take it that that is
8 that time gap, if I can put it that way, is based on the
9 best hope you would have about the activities that would
10 have to take place in Government prior to your being allowed
11 to get on the line.

12 A That's right.

13 Q And obviously the time
14 frame that you gave us is the time that it will take from
15 whenever the permit is granted. Is that the case?

16 A To the best of my
17 knowledge, yes.

18 Q So when you say that
19 you'll begin to lay the pipe in 1979, what you're really
20 saying is that you're going to begin laying pipe roughly
21 a year and a half after permits are granted.

22 A That's correct.

23 Q Whenever those permits
24 may be granted?

25 A That's correct.

26 Q Now, in terms of delays

1 that may take place in the process of putting the line
2 in ground after permits are issued. Has the Pipeline
3 Company done any risk analysis of prospects of delay in
4 it's own operations?

5 MR. BURRELL: There was a risk
6 analysis performed and, on this project, I'm not familiar
7 with the details of it, but a risk analysis was performed
8 in the project.

9 Q Do you know what it
10 showed, Mr. Burrell?

11 A I'm sorry, I don't know
12 the particulars of it; but we can certainly look into it
13 and provide the information.

14 Q Are you aware that
15 studies had been done in the United States showing that
16 there is a substantial risk of delay in a proposal such as
17 this, once permits are given.

18 A I know that there are a
19 number of studies that have been undertaken by a number of
20 different groups and some of those groups were located in
21 the United States, yes.

22 MR. HOLLINGWORTH: Could you advise
23 which document you are referring to, Mr. Goudge?

24 MR. GOUDGE: Particularly the
25 Protection
26 Environmental / Agency Risk Analysis of delays, or is that
one that you are familiar with?

1 MR. BURRELL: We are aware that
2 they have been done and as I say we have done one ourselves.

3 Q Now, in viewing with
4 camp locations, the correction you made on page 7 of your
5 evidence brings I think a fourth camp up to milepost 266,
6 is that right?

7 MR. SAKER: That is right.

8 Q How far is that from
9 Whitehorse?

10 MR. BOUCKHOUT: I don't know
11 precisely where the town boundaries are, but it's pretty
12 close, right in there:

13 Q Yes. Like very close
14 isn't it Mr. Bouckhout. Isn't there going to be a camp
15 right on the outskirts of Whitehorse.

16 A Very close, that's right.
17 Also, Mr. Goudge, also happens to be on that portion of
18 the line which we discussed earlier and we are seriously considering
19 relocation on, and since that particular camp location
20 relates to alignment location the entire system is under
21 review, again, in that section.

22 Q And that would be a
23 750 or 800 person camp?

24 A I am not sure what the
25 manpower for that particular camp would be, they do vary.

26 Q I take it next time you

1 will be addressing problems like the problem of keeping
2 the camp fenced in, so to speak.

3 MR. SAKER: We can keep them
4 fenced in, but we can't keep them at home.

5 Q I take it that's right,
6 Mr. Burrell that you will be dealing with that the next
7 time --

8 MR. BURRELL: Yes, that's right,
9 we will and Mr. Saker says that this is a typical main
10 line construction camp, so it's of the order of manpower
11 that we were talking about earlier.

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1 Q On page 13 of your evidence
2 you refer, I take it with some pride, to the Canadian content
3 of your project?

4 MR. BURRELL: Yes.

5 Q Using whatever basis you used
6 to arrive at the figure, do you have any estimate of the Yukon
7 content?

8 A I don't have one, no.

9 Q Any ballpark guess or is it
10 that you just don't have it here?

11 A Well it is difficult to--
12 probably difficult to make such an estimate now until you
13 know exactly how much involvement the local businesses are
14 going to have. We have taken the position, as we will testify
15 to later, that we will make the opportunities available and
16 we will structure our project so that local business men can
17 get involved. The degree to which they will get involved,
18 I think that is going to be difficult to say. The object
19 of our program is to structure our project in such a way that
20 they can get involved. One of the examples of which we use,
21 is that, for example, if we need 40 houses rather than going to
22 a local contractor and say, look we need 40 houses and he says
23 no I can't do that and then turning around and giving it to a
24 southern contractor, we would then look at splitting up the
25 number of houses that we need and say a local contractor could
26 take three, we would give him three and someone else some other

1 number, rather than just demanding that one contractor build
2 all 40.

3 Q But you are not prepared to give
4 an estimate as to what percentage of the 85 per cent Canadian
5 content will be Yukon content?

6 A Other than to say, I can't
7 give a number, other than to say that one of the objectives
8 of our proposal is to maximize the Yukon involvement and
9 really the extent to which that happens is in a great deal
10 dependent upon the extent to which the businessmen themselves
11 want to get involved.

12 Q Now, lastly one relative
13 matter of detail. On page 9 and 10, the bottom of 9 and the
14 to of 10 in your prepared evidence you refer to the archaeolo-
15 gical site issue. Are any studies underway by the company
16 to identify archaeological sites that have not yet been iden-
17 tified?

18 MR. BOUCKHOUT: No there are not. This is one
19 of the studies referred to earlier in the session this after-
20 noon, the objectives and studies are really twofold and two-
21 phased. The first phase would be to examine the line based on
22 air photo interpretations before any cuts had been made. In
23 other words, to examine the location of the line in particular
24 in those open areas which have the physical conditions which
25 are conducive to archaeological sites. Things haven't changed
26 that much in thousands of years. In other words, a location

1 which would be conducive to someone camping today, was
2 probably conducive some time ago. So the first phase then is
3 a general overview based both on air photo interpretation and
4 field work in those areas that are accessible.

5 The second phase then is not possible
6 to be done until you have actually cleared the right-of-way.
7 That's the more detailed ground work that is necessary once
8 you clear a right-of-way and then you can go in and do the very
9 detailed work along the alignment. We have a proposal in from
10 our archaeological consultant to do that first phase of work
11 this year. It is under consideration.

1 Q A second stage would be
2 virtually a detailed walking of the line.

3 A That's correct, yes.

4 Q And do you contemplate
5 that as well?

6 A Yes, certainly, but as
7 I mentioned, that's the kind of thing that really can't be
8 done effectively until you actually clear the line.

9 Q But you would do that
10 in advance of any digging?

11 A Yes, certainly.

12 Q Now, lastly, do you have
13 any rough figure on the number of archaeological sites you
14 have already identified?

15 A I couldn't give you a
16 rough figure in the environmental statement when that
17 portion of same was put together, a very exhaustive review
18 of current literature and archives and so on was done, as
19 I recall. The actual figures, I don't know.

20 Q I take it it would be your
21 view that with those sites you've discovered and those you
22 may discover with your programs, site specific diversions
23 will be attempted.

24 A That's correct, again, it
25 depends on the condition, the nature of the site, the
26 extent of the site and so on, but that is one of the major

1 options. If a very significant site were to be found and
2 this would be assessed by professional archaeologists then
3 a diversion certainly would be considered and would
4 probably be the way of avoiding impact on the site in most
5 cases.

6 When you're going into actual
7 ditching, then salvage is not a mitigated procedure
8 it's an after procedure.

9 Q Thank you.

10 Those are all the questions I
11 have, sir, at this time.

12 MR. CHAIRMAN: Mr. Hollingworth,
13 do you have anything in the way of re-examination?

14 MR. HOLLINGWORTH: No examination.

15 MR. TAVES: May I explore one thing
16 that was brought up by Mr. Goudge?

17 MR. CHAIRMAN: By all means.

18 I take it this will be brief?

19 MR. TAVES: Yes, I'll just be a
20 minute.

CROSS EXAMINATION BY MR. TAVES:

21 Q Mr. Littledale, in the event that
22 a Dempster line on the Dempster Highway were built, would
23 the 48-inch line south of the Junction, would it be able
24 to handle it, or would a looping process then be inescapable?

25 MR. LITTEDALE: You know, this
26 is a very hypothetical question.

1 I really don't know. If the
2 line was, you know, operating at capacity, obviously it
3 wouldn't. If it wasn't then it might.

4 MR. TAVES: If the line was
5 operating to capacity, then it wouldn't?

6 A Pardon?

7 Q If the line was operating
8 to capacity it would not --

9 A Well, what I'm saying,
10 here we've got a 48-inch line coming down, okay, and some-
11 body decides all of a sudden to build a line from somewhere
12 else, Dempster, wherever; there are so many lines I'm
13 getting confused, but it's coming down from here and it's
14 going to join into this main trunk line. So the first
15 thing you've got to look at and say is there any room left
16 in there for it to take this.

17 Q Right.

18 A So, if there was room for
19 it, you could take it, if there was no room, you couldn't
20 take it. You would have to add to that capacity.

21 Q And if both of those
22 lines were, that is if the proposed line were operating
23 to capacity as was the line from Prudhoe Bay, would there
24 then be required a loop?

25 A Now, you're saying if
26 the main line that we have an application --

Littledale, Bouckhout, Burrell, Saker.
Cr Ex by Mr. Taves

1 Q It's operating to capacity--

2 A --for, it's operating at
3 capacity, and somebody else came in with another line from
4 somewhere and wanted to join into that line, and then you
5 would have to add to the capacity. Now by adding to the
6 capacity may mean a loop and in all probabilities would
7 mean loop.

8 MR. CHAIRMAN: I take it there
9 are no other questions, so I thank the members of the panel
10 for their testimony.

11 (Witnesses Aside)

12 MR. CHAIRMAN: We stand adjourned
13 until 10 o'clock in the morning.

14 PROCEEDINGS ADJOURNED
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GOVT PUBLS

ALASKA HIGHWAY PIPELINE INQUIRY

IN THE MATTER OF AN APPLICATION BY FOOTHILLS PIPE LINES
(YUKON) LTD. TO THE MINISTER OF INDIAN AFFAIRS AND
NORTHERN DEVELOPMENT FOR A GRANT OF THOSE INTERESTS IN
THOSE AREAS OF TERRITORIAL LANDS IN THE YUKON TERRITORY
AS MAY BE NECESSARY FOR THE CONSTRUCTION AND OPERATION
OF THE SAID NATURAL GAS PIPELINE AND THE WORKS AND
FACILITIES CONNECTED THEREWITH AND INCIDENTAL THERETO,

AND

IN THE MATTER OF A BOARD OF INQUIRY ON THE SOCIO-ECONOMIC
ASPECTS OF AN ALASKA HIGHWAY GAS PIPELINE.

BEFORE THE BOARD

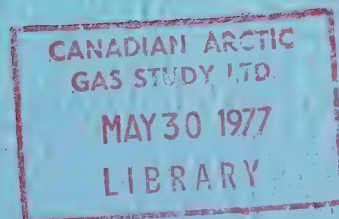
K.M. LYSYK, Esq., Q.C., CHAIRMAN

WILLARD PHELPS, Esq., MEMBER

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PROCEEDINGS

VOLUME II

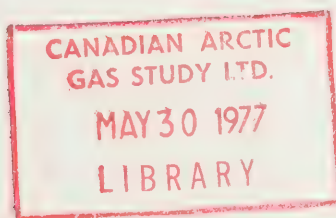


WHITEHORSE, Y.T.

MAY 11, 1977

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1 Whitehorse, Y. T.

2 PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT

3 May 12th, 1977

4 MR. GOUDGE: Mr. Chairman, members of
5 the Board, I wonder if we could convene for this morning
6 please. Mr. Hollingworth, I believe, is ready to present the
7 next panel for Foothills Pipe Lines.

8 MR. CHAIRMAN: I will call everything
9 to order. Mr. Hollingworth?

10 MR. HOLLINGWORTH: Thank you Mr.
11 Chairman, members of the Board. Sir, there is one matter left
12 over from yesterday. You asked if I had re-examination. At
13 that time I indicated that I did not.

14 There is one matter related to
15 planning for seismic risk in the Shakwak area that I would
16 like to put to Mr. Littledale with the Board's permission.
17 REDIRECT EXAMINATION:

18 Q Mr. Littledale, perhaps you'd like
19 to comment on any other measures that Foothills has designed
20 for the possibility of seismic movement in Shakwak area?

21 MR. LITTEDALE: Yes, there's one
22 very important one which I omitted to mention yesterday in
23 discussing this matter.

24 Our design also calls for automatic
25 shut-off valves in the area of seismic activity where you
26 might -- the experts say that this is the fault, and on either
side of the fault, putting it in very plain language,
automatic shut-off valves would be installed so that if the

1 line did rupture, which is a remote possibility, but if it
2 did, then these valves automatically close entrapping the
3 gas upstream and downstream of the area of the rupture.

4 Thank you.

5 MR. HOLLINGWORTH: Thank you, Mr. Littledale.

6 I'm now prepared to proceed with
7 the second panel of Foothills Pipelines' evidence. Before
8 you you have a panel made up of some of the members of the
9 panel that was on yesterday, but nevertheless, I will
10 introduce everyone. Starting on my far right is Mr. William J.
11 Deyell, Senior Vice-president of Alberta Gas Trunk Line
12 Company Limited; seated next to him is Mervin E. Miller, an
13 economic consultant from Whitehorse; Mr. Burrell is next to
14 him; Mr. Ellwood is next, he is the Manager of Northern Affairs
15 for Foothills Pipelines; and Mr. Saker; and Mr. Littledale
16 were before you yesterday.

17 I'd like to proceed now into their
18 evidence.

19 MR. WILLIAM J. DEYELL: Sworn

20 MR. MERVIN E. MILLER: Sworn

21 MR. JOHN BURRELL: Resumed

22 MR. J.A. ELLWOOD: Sworn

23 MR. JACK SAKER: Resumed

24 MR. RICHARD LITTLEDALE: Resumed

25

26

Littledale, Baker, Ellwood, Burrell
Miller, Levell
In Chief

DIRECT EXAMINATION

1 Q Mr. Burrell, what is your position
2 with Foothills Pipe Lines Limited?

3 A I am vice president of
4 Corporate Development.

5 Q Does the attached sheet having
6 your name at the top accurately describe your academic
7 qualification?

8 A Yes it does

9 Q And briefly sir --

10 MR. CHAIRMAN: I am sorry, Mr.
11 Hollingworth, I don't seem to have the attached sheet.

12
13 MR. GOUDGE: I think that represents
14 Mr. Burrell's qualifications.

15 MR. HOLLINGWORTH: We will see
16 Mr. Goudge later, Mr. Burrell.

17 Q Perhaps, Mr. Burrell you could
18 outline your academic qualifications for the assistance of the
19 Board?

20 A I have been in the natural gas
21 business for approximately 20 years. I have worked in
22 distribution systems with Canadian Western Natural Gas in
23 Calgary for about 5 of those years.

24 For ten years I worked for Alberta
25 and Southern and Alberta Natural Gas Company in the natural
26 gas transmission and gas processing design and construction and

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 operations. I have been with Canadian Arctic Gas for two
2 years and I have been with Foothills Pipe Lines now for
3 about -- for over two years. Of the five years in my
4 experience I have been involved with northern natural gas
5 pipeline proposals.

6 Q I understand sir you are an
7 engineer by training?

8 A Yes, I am.

9 Q Where is your degree from?

10 A From the University of
11 Alberta in civil engineering. I graduated in 1957.

12 Q Mr. Burrell, what matters will
13 this panel address?

14 A The overall objectives of the
15 Foothills Socio-economic program and how it proposes to
16 accomplish this objective.

17 A community liaison program.

18 The supply on natural gas to several
19 Yukon communities.

20 Policies and objectives as they
21 relate to the provision of opportunities for Yukon businesses.

22 The overall employment policies of
23 Foothills.

24 Policies of the company as they
25 effect social matters.

26 Construction phase manpower

Littledale, Baker, Illwood, Burroll,
Miller, Burrell
in Chicago

1 requirements, hiring procedures and special agreements.

2 Union jurisdiction.

3 Operation and Maintenance employment
4 opportunities.

5 Operation and maintenance policies and
6 procedures.

7 The availability of operations, and
8 maintenance training positions with Westcoast Transmission
9 Company Limited and the Alberta Gas Trunk Line Company
10 Limited.

11 The experience of both Alberta Gas
12 Trunk and Westcoast regarding the use of local businesses,
13 local hire and the effect which pipeline construction has
14 had on nearby communities.

15 Inflationary trends arising from
16 the project.

17 Government revenues and expenditures.

18 In speaking of these matters the
19 panel will rely upon Part 5, Section A of the company's
20 application to the National Energy Board and the Department
21 of Indian Affairs and Northern Development, which is the
22 socio-economic statement relating to this proposed project.

23 In addition the witnesses will also
24 rely upon the information which has been developed since
25 this statement was prepared and personal experience.

Littledale, Saker, Ellwood, Burrell,
Miller, Devell,
In Chief

1 Q Mr. Burrell, what res-
2 ponsibility do you have with respect to socio-economic matters?

3 A I have overall responsibi-
4 lity for the socio-economic program of our company.

5 Q What is the overall objec-
6 tive of the Foothills socio-economic program?

7 A The overall objective is
8 to ensure that our pipeline system is planned, constructed
9 and operated in such a manner that it operates the maximum
10 net benefits to the residents of the Yukon. In stating this
11 objective, Foothills recognizes that it must remain responsive
12 to the society and economy of Yukon, and thus intends to
13 remain as flexible as possible in its policies towards mini-
14 mizing the detrimental impacts and maximizing the beneficial
15 impacts of its project. An elaboration of the objectives of
16 our project is contained in Section 5A, 1.1 of our Socio-
17 Economic Statement. In the development of this program
18 Foothills intends also to rely upon the extensive background
19 and knowledge in this area of its two sponsor companies,
20 Westcoast Transmission Company Limited and The Alberta Gas
21 Trunk Line Company Limited. In fact much of the program
22 is an extension of the basic approach which these two companies
23 currently practice, and also that which AGTL followed in its
24 earlier involvement with proposed northern pipeline systems.

25 Q How was the Socio-Economic
26 Statement for your project developed?

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Miller, Devell.
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A The methodology for preparation of our Socio-Economic Statement is set out in Section 5A, 1.1, "Introduction" and 5A, 5.0, "Impact on Yukon" of the application. However, in summary the following steps were followed:

(a) Assembly of a description of the current and past socio-economic trends of the area.

(b) Identification of the potential interactions between our project and the existing socio-economic milieu.

As an example, we attempted to define the interaction between our project and the transportation system, the educational system and the labour force, etc. Company policies were then developed towards minimizing detrimental impacts and maximizing the beneficial impacts of our project.

(c) Prediction of the effects of the project on the existing socio-economic environment and to obtain feed-back from persons, communities or government agencies or departments affected and to use that feed-back as input to possible project modifications. This process will be ongoing with continuous refinement occurring as the project evolves.

Q What efforts has Foothills made in order to inform Yukoners about its project?

A We have established an
office in Whitehorse which is staffed by full-time employees.

Mr. Ellwood is the Manager of this office, which has been open since September of last year, about one month following our filing of an application for the right to construct and operate the Yukon section of the Alaska Highway Pipeline Project. During this time we have held a series of public meetings up and down the Highway. We have attempted to inform the people about our project, answer questions about the project and receive any comments or advice the people had to offer. We have taken a display of models and photographs of pipeline facilities and construction to give the people some understanding of what activities could be expected and what facilities could result if our pipeline goes ahead. We have also made presentations and had discussions with a number of local organizations and individuals.

Participation in these presentations and discussions has not only been by Mr. Ellwood, but also by members of our Calgary staff, including Mr. Gibson, Chairman of the Board, and Mr. Blair, our President. I too, have spent quite a bit of time in Whitehorse, and I have also accompanied Mr. Ellwood to the various communities along the highway.

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A Foothills will put in place
a community liaison program which involves the placement of
Company representatives, preferably local people in selected
communities. The program will have a two-fold objective to
provide local residents with information about the proposed
pipeline system; and to provide them with a means of
communicating their views as they relate to the system.

14 A Yes, we have. We have
15 performed a preliminary study to determine the feasibility
16 of providing natural gas to several Yukon communities. The
17 availability of natural gas supplied for use in Yukon is an
18 item of major interest and concern to the people of Yukon.

26 Our proposed pipeline thus offers

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1 a potential of a natural gas supply to a maximum number of
2 Yukon residents.

3 Q What is the nature of the
4 preliminary study which you have undertaken?

5 A First, it was recognized
6 that the Alaska Highway Pipeline Project will transport
7 Prudhoe Bay gas to market areas in the United States. In
8 other words, American gas to American markets. In order to
9 make a gas supply available to Yukon communities, Foothills
10 has developed a plan whereby American natural gas will be
11 made available in Yukon from our pipeline in exchange for
12 Canadian natural gas which will be delivered to the pipeline
13 in Alberta.

14 Foothills has made an arrangement
15 with Pan Alberta Gas Limited to accomplish this and they are
16 presently in the process of making the necessary applications
17 to the Government of Alberta to obtain approval for this.
18 We do not anticipate any difficulties with this.

19 We then estimated the cost of
20 natural gas compared with the forecast cost of fuel oil and
21 electricity for the communities along the Highway. In
22 addition to these communities there are a number of lodge
23 complexes and service station areas which might also receive
24 gas on an economic basis, when compared to alternative energy
25 sources, depending upon the distance from the pipeline and
26 the volume of natural gas required.

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1 We have not at this time determined
2 the feasibility of providing natural gas service to such
3 potential customers, however. Such studies in our opinion
4 are best done following construction of the pipeline.

5 Q Who performed the design
6 and cost estimating for facilities necessary to provide
7 natural gas for the communities?

8 A The design and costing for
9 the lateral and distribution systems were performed for
10 Foothills by Pacific Northern Gas Limited. After visiting
11 Yukon communities along the Alaska Highway, Pacific Northern
12 provided to us, by community, the forecast number of customers
13 and resulting gas volumes required, as well as the capital and
14 operating cost for the lateral and distribution systems.
15 The population growth was assumed to be that as forecasted by
16 our local consultants.

17 Pacific Northern is a company well
18 established in the gas distribution business in Canada. It
19 commenced operations in 1968 and presently serves about
20 4,100 customers located in thirteen northern British Columbia
21 communities. The lateral lines and distribution systems in
22 each community were designed, constructed and are presently
23 being operated by Pacific Northern. We utilized Pacific
24 Northern to provide this information because we felt it was
25 important that the required work be performed by experts in
26 that particular field.

Little Lake, Baker, Willowood, Purrell

1971, 1972

1973, 1974

1 Q How have you determined the
2 estimated cost of natural gas to the Yukon customer?

3 A By adding the estimated unit
4 cost of natural gas to the point where the community
5 lateral connects to the main line which is the inlet to the
6 community laterals and the estimated cost of service for
7 transporting the natural gas from the main line to the point
8 of end use.

9 Q What price on natural gas did
10 you assume would be applicable at the point where the
11 community lateral connects to the main line?

12 A We assumed that the cost of
13 the gas at this location would be the Alberta Border price.
14 The Alberta border price is defined as the price paid at
15 the Alberta-Saskatchewan border for natural gas consumed
16 in Canada but outside of Alberta.

17 Q This Alberta border price as used
18 in our study was forecasted by our evaluations and forecast
19 department and based upon the best information currently
20 available.

21 Q Do you intend to own
22 and operate the community distribution system?

23 A No, not unless it is absolutely
24 necessary in order for a community to get natural gas
25 service. Our business is natural gas transmission. In
26 addition we believe this provides a good ^{business} opportunity for a

1 northern firm or municipality.

2 Q What benefits will northern
3 natural gas consumers realize from the use of natural gas?

4 A The result of the preliminary
5 studies which we have conducted show that natural gas can
6 be made available to most Yukon residents at a saving when
7 compared to the cost of purchasing fuel oil or electricity.
8 For example, it is estimated that Whitehorse by the mid
9 1980's could realize an annual saving of approximately
10 two hundred dollars per household when compared to the use of
11 fuel oil. For Watson Lake this saving could be
12 approximately five hundred dollars per household.

13 It should be pointed out too that
14 these comparisons were made on an economic basis only and as
15 such did not take into consideration the cost of conversion
16 or the added benefits offered by natural gas over fuel oil
17 in particular, such as, cleanliness, convenience, more
18 versatility in terms of variety of appliances and need for
19 less equipment maintenance.

20 In addition the natural gas service
21 for those communities in which electricity is generated
22 thermally is that conversion to natural gas as a generating
23 fuel could also result in lower electrical costs to the
24 community residents.

25 Another important factor too, in
26 favour of natural gas service is that once the pipeline

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1 facilities are installed the cost of transporting natural
2 gas remains relatively constant. There is no such guarantee
3 with fuel oil given the present methods of transportation.

4 Q Is Foothills prepared to assist
5 the residents in making a conversion to natural gas?

6 A The supply of natural gas to
7 Yukon communities will obviously result in a requirement
8 for stoves, heaters and systems compatible with natural gas.
9 Availability of natural gas will necessitate replacement
10 or adaption of equipment designed for consumption of other
11 energy sources, although Foothills does not intend to own
12 or operate the community laterals or distribution systems it is
13 prepared to distribute information to ensure that
14 conversion of equipment and systems to natural gas use
15 can occur without undue cost or inconvenience.

16 Q How were the comparison costs
17 for fuel oil and electricity generated.

18 A We retained a consulting
19 firm to make such a forecast. This forecast was done on
20 a community by community basis for the years 1976 to 1992.
21 A report covering the findings of their studies was provided
22 to us and this was used in making the cost comparisons with
23 the cost of natural gas.

24 Copies of this report have been
25 filed with the Inquiry.

26 Q You had mentioned that you

Littledale, Saker, Ellwood, Burrell
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1 had to date done only a preliminary study into the
2 feasibility of providing natural gas to Yukon communities,
3 will other studies be necessary?

4 A Yes once the pipeline project
5 is approved it will be necessary to do a detailed study
6 for each of the highway communities to determine more
7 precisely the cost of natural gas to the Yukon consumer.
8 This study will involve accurately determining where the
9 distributing pipeline should be located in the community in
10 conjunction with local authorities, how large these lines
11 should be, et cetera.

12 In addition a door to door survey
13 will have to be conducted to explain the use of natural
14 gas and determine how many residents and businesses will
15 take gas. From this information the actual cost of gas
16 to the consumer will then be determined. I might also
17 add that since we have done our preliminary study we
18 also have investigated methods by which the price of natural
19 gas could be provided to Yukoners at a lower price than
20 what we have estimated. One item that we are looking into
21 is a possibility of using plastic pipe distribution systems
22 within the communities rather than all steel systems, a
23 practice which is gaining popularity in southern Canada.
24 It is estimated that if plastic pipe distribution systems
25 were utilized the cost of natural gas to the Yukon consumer
26 could decrease by approximately twenty five per cent from
that which was shown in our preliminary studies.

201
Littledale, Saker, Ellwood, Burrell,
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1 Q Mr. Burrell, could you
2 please outline the policies and objectives of Foothills as
3 they relate to the provision of opportunities for local
4 business.

5 A Yes, we believe that there
6 are many opportunities which the pipeline project can offer
7 to local businessmen, we also believe that the extent to
8 which the local businessmen will get involved with business
9 opportunities which the pipeline offers will depend, not only
10 on the desires of the people themselves, but to a great
11 degree on the policy position taken by the Pipeline Company
12 itself. In addition, local businesses employ local
13 residents and as a result, provide long term benefits to
14 the Yukon communities.

15 A prime objective of Foothills is
16 to maximize within practical limits, the participation of
17 local business in our project. Our overall policy will be
18 to encourage and support the development of local business
19 enterprises and to maximize the local content of our project
20 in much the same manner as we are working towards maximizing
21 the Canadian content of the Canadian portion of the Alaska
22 Highway Pipeline Project.

23 In order to carry out this policy,
24 we will purchase goods and services from local companies
25 whenever it is practical to do so.

26 Q What do you see as Foothills'

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1 prime role in local business development?

2 A We see our prime role as
3 being the formation and implementation of policy to encourage
4 local involvement.

5 Q With respect to the
6 encouragement and involvement of local businessmen in your
7 project, what policy positions have Foothills established?

8 A We intend to obtain goods
9 and services from local businessmen providing this does not
10 cause any unreasonable hardships for the local residents,
11 such as shortages of supply or higher costs.

12 Where practical we intend to make
13 contracts available that are of a size that can be handled
14 by local firms. We will provide as long a lead time as
15 possible so that local businessmen will have time to bid
16 properly on the contracts. We also believe that the most
17 effective means of involving local business will be through
18 the utilization of a bidder's list and procedures which give
19 the local businessmen a fair chance of winning the contracts
20 they are capable of handling.

21 We therefore intend to develop, before
22 construction of the pipeline commences, a bidder's list
23 comprised of Yukon businesses who could potentially supply
24 goods and service to the pipeline project. This bidder's
25 list will be developed in consultation with local businessmen
26 and business organizations. In addition to development of this

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1 bidder's list, this consultation is designed to ensure that
2 Yukon businessmen are aware of the opportunities to participate
3 in and benefit from the construction and operation of the
4 proposed Alaska Highway Pipeline Project and ensure that
5 Foothills' purchasing policies reflect any special circumstances
6 or needs of Yukon businessmen.

7 We believe this will be a very
8 effective means of involving local business in our project.

9 In addition, we will be locating our
10 construction and operating headquarters in Whitehorse, thus
11 enabling close contact to be maintained with Yukon companies
12 and organizations.

13 During the operation phase, we will
14 also have area offices in Beaver Creek, Haines Junction, Teslin
15 and Watson Lake. Contact with local businesses will also be
16 maintained through these offices.

17 Q What is Foothills approach
18 to encouraging the involvement of local business?

19 A While business opportunities
20 will be available during the construction phase, we believe
21 it is most prudent to look at the operational phases providing
22 the best opportunity for long term benefits.

23 We will encourage the pursuit of this
24 approach, but we do not intend to be rigid and we will
25 certainly adjust to suit changing needs and situations.
26 Certain Yukoners, individually or in groups, may wish to

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Miller, Deyell
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1 pursue a business role during the construction phase, and there
2 will be opportunities for them to do so. Foothills will
3 certainly co-operate to make this possible, however, caution
4 will need to be exercised so as not to stimulate the
5 formation of new businesses which could not be sustained following
6 the completion of the pipeline construction phase, with
7 resultant hardships on the local businesses in the community.

8 Q What specific opportunities
9 for small local businesses will there be during the
10 pipeline construction phase?

11 A The list is extensive,
12 including clearing of the right-of-way, revegetation of the
13 right-of-way, concrete weight manufacturing, supplying
14 lumber and piling, trucking, supplying gravel, expediting,
15 warehousing, construction of houses and office buildings,
16 supply of automotive parts, groceries, bulk fuel and many
17 more. However, as can be seen, many of these local business
18 opportunities are of short duration.

19 Q Mr. Burrell, what is
20 Foothills' overall hiring policy as it relates to Yukoners?

21 A Foothills intends to give
22 preferential hiring treatment to all employable Yukoners.
23 When qualifications of the local resident and non-residents
24 are equal, preference will be given to the local resident.

25 Those Yukoners who seek employment
26 during the construction phase and do not have sufficient

1 skills, will be encouraged to take advantage of the available
2 training opportunities and those skills which will present
3 employment possibilities on a continuing basis in Yukon.

4 Those northerners who become
5 operations and maintenance personnel with our company will be
6 given the opportunity to receive training, which will enable
7 them to take advantage of the long term employment opportunities
8 offered by the pipeline operational phase. This training will
9 not only be directed towards the upgrading of skills, but also
10 towards qualifying northerners to take on positions of
11 supervisory and managerial responsibilities.

12 Foothills is not unfamiliar with
13 skill training programs for northerners, in fact, one of the
14 Foothills' sponsoring companys, Alberta Gas Trunk Line, started
15 the northern training program in 1970, which has since
16 evolved into the present Nortran Program.

Littledale, Saker, Ellwood, Burrell,
 Miller, Dayell.
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Southerners wishing employment on the Yukon portion pipeline will be hired south of 60 and no pipeline employment hiring of southerners will occur in Yukon. Only Yukoners will be hired in Yukon for employment on the pipeline project. One of the prime reasons for putting forward this policy of course, is with regard to the concern of in-migration into Yukon, a matter which will be dealt with in another panel.

Q That general policy positions does Foothills have with respect to training and employment?

A With respect to training and employment, Foothills has taken the position that:

(a) In any given job category all employees will be treated equally and each will receive equal benefits and allowances, including housing provisions.

(b) * All workers will be assigned responsibilities in accordance with their qualifications. Safety of equipment and personnel must at all times take priority.

(c) During the construction phase, local residents will be offered employment at a location as close to their place of residence as it is practical to do so.

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1 (d) We are willing to consider employment rotation and
2 labour pool systems for the construction phase.
3 However, before this could become workable all
4 parties concerned would have to be in agreement
5 with the system to be adopted.

6 (e) During the construction phase, Foothills will rely
7 heavily upon the services of contractors and sub-
8 contractors and Foothills will by contractual
9 obligation, assure itself that these firms operate
10 in compliance with Foothills' policies respecting
11 employment and working conditions.

12 Q Throughout your testimony,
13 you have used the term "Yukoner". What is the definition of
14 this term?

15 A We have not put forward a
16 definition of "Yukoner" as such, but it is extremely important
17 that "Yukoner" be properly defined in order to assure that
18 local people receive the maximum employment benefits which the
19 pipeline offers. Unfortunately, there are a number of defi-
20 nitions of "Yukoner" now in use and I would strongly recommend
21 that the universal definition of the term be established in
22 order to avoid any future confusion or uncertainty. We
23 would look to the Yukon Territorial Government or this Board
24 of Inquiry to provide such a definition.
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Q How do you see that Yukoners will be able to take best advantage of the employment opportunities which the construction phase of the pipeline offers?

A We believe that an efficient manpower delivery system must be in place if employment of Yukon workers on the project is to be optimized.

(a) In order to avoid unnecessary duplication and competition for the local worker, the system should be designed to deliver Yukon manpower to the total project, i.e., pipeline and related activities.

(b) The system should, as much as possible, direct persons into the vocation for which they are best suited. The system should prepare the people for the working conditions which they will encounter.

(c) As much of the delivery system's functions as practical should be carried out in the communities, thus allowing Yukoners to remain in their home communities as long as possible.

(d) The system should utilize services available from existing sources as much as possible. Since government departments are already providing services similar to those described and in fact have offices located in a number of Yukon communities, it is Foothills' opinion that it would be appropriate for government to continue to provide such services. Foothills will co-operate with the appro-

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1 priate government agencies, contractors, unions and
2 local organizations toward the development of such
3 a manpower delivery system. Initial discussions
4 have already taken place in this regard with
5 representatives of the appropriate local government
6 agencies.

7 In addition, Foothills will develop and make known
8 to the public its employment policies. This process
9 is presently ongoing.

10 Q What is Foothills' position
11 with respect to providing pre-construction training?

12 A The mechanism for providing
13 pre-construction and construction training should be developed
14 and made known to the public. While Foothills will co-operate
15 fully in this, Canada Manpower, contractors and unions have
16 traditionally provided this training and Foothills believes
17 this practice should continue.

18 Q Does Foothills intend to
19 provide a worker orientation program?

20 A The Alaska Highway Pipeline
21 Project is to be constructed in a manner which will be familiar
22 to most, if not all of the southern workforce needed to be
23 brought into Yukon in order to complete the project. Likewise,
24 it is expected that because of previous construction activities
25 in Yukon, Yukoners will experience little or no difficulty
26 in adjusting to work on the pipeline project since standard

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1 construction practices will be used. For these reasons,
2 extensive orientation programs are not considered to be ne-
3 cessary for the construction phase of this project. During
4 the operation and maintenance phase however, orientation
5 programs similar to the one now being conducted by Nortran,
6 will continue to be part of the normal recruitment and training
7 program.

8 Notwithstanding the above, during the
9 construction phase Foothills does intend to provide an orien-
10 tation program which will include:

- 11 (a) An explanation of camp rules and regulations in-
12 cluding those respecting equipment, building and
13 vehicles,
- 14 (b) Explanation of permit stipulations and other appli-
15 cable codes and regulations,
- 16 (c) Safety practices and working conditions. The program
17 will be tailored to suit the various segments of the
18 workforce.

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1 Q Thank you, Mr. Burrell.

2 Mr. Ellwood, if we could turn to you,
3 as I said previously, you're manager of Northern Affairs for
4 Foothills Pipelines?

5 MR. ELLWOOD: Yes.

6 Q And the attached sheet,
7 having your name at the top, does it accurately describe your
8 academic qualifications and experience?

9 A Yes, it does.

10 Q Now, if we could just turn
11 to that for a moment, Mr. Ellwood. I understand that you
12 presently reside in Whitehorse, that you have a bachelor
13 of science in mechanical engineering, obtained in 1968 from
14 the University of Alberta and a bachelor of arts in
15 archaeology, obtained in 1974 from the University of Calgary.

16 A That's right.

17 Q That your work experience
18 commenced in 1968 with Montreal Engineering Company in Calgary
19 where you were employed as an engineer in training on the
20 design of natural gas pipeline compressor facilities?

21 A Yes.

22 Q You continued in 1969 to
23 1972 with the Alberta Gas Trunk Line Company Limited in
24 Calgary, where you were employed as a Design Engineer and
25 Construction Inspector with the responsibility for the design
26 of natural gas pipeline compressor stations and for quality

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1 control during the construction of compressor stations and
2 the pipeline.

3 A Yes.

4 Q Then in 1973, in the summer,
5 you participated in an archaeological survey and excavation at
6 Cardston, Alberta under the direction of Mr. M. Quigg, then
7 with the faculty of graduate study at the University of Calgary?

8 A That's correct.

9 Q And from 1974 to the present
10 you have been with Foothills Pipe Lines Ltd. as progressively,
11 an Environmental Engineer, Supervisor of Socio-Economic
12 Affairs, and are currently the Manager of Northern Affairs?

13 A Yes.

14 Q Mr. Ellwood, what policy
15 positions has your company taken towards minimizing the
16 social impact which the pipeline could create?

17 A Firstly, I think most will
18 agree with me, that because of the nature of the project, the
19 level of activity, and the number of workers involved, it is
20 the construction phase of this project which presents the
21 greatest concern.

22 For this construction phase, we have
23 adopted the following policies and plans in order to
24 minimize the demands which the project will place on
25 regional and local infrastructure.

26 (1) Routing of construction

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1 personnel to and from the jobsite will be done as expeditiously
2 as possible. The existing airports at Watson Lake and Whitehorse
3 will be utilized as points of arrival and departure from
4 and to the workers' home location and connecting transportation
5 will be scheduled so that there will be minimal waiting time
6 at these airports.

7 (2) Return transportation to the
8 point of hire will be provided for all workers who quit, are
9 fired, or leave their work for any reason.

10 (3) Construction workers will be
11 housed in self-contained camps, well removed from communities.

12 (4) Casual transportation will
13 not be made available to any of the construction workers for
14 any purpose, in addition parking space at these campsites
15 will be limited.

16 (5) The construction camps will
17 provide emergency health services and it is expected that the
18 majority of illnesses and accident cases will be treated at
19 the camps. When hospitalization of any of the workers is
20 required, it will be provided at the regional hospitals, or
21 in some cases, at hospitals in the South. Ambulance services
22 will be provided by Foothills or our contractors.

23 (6) Foothills recognizes that
24 law enforcement must remain under public control. We have
25 consulted and will continue to consult with the responsible
26 agencies so that they are fully aware of our project so that

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1 they can plan towards ensuring that adequate law enforcement
2 facilities are in place at the time of construction and
3 beyond. Foothills will, of course, provide camp and right-
4 of-way security and routing policing of our own regulations
5 and permit conditions during construction. Co-operation and
6 accessibility to the camps and work sites will be available
7 to the R.C.M.P. or other peace officers pursuant to their
8 responsibilities. Further, we will provide office space,
9 accommodation and access to communication facilities to the
10 R.C.M.P. at all our major camp sites.

11 (7) All contractors and sub-
12 contractors will be required to observe the same regulations
13 which Foothills has set for itself, whether imposed by permit
14 restriction or not.

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Littledale, Saker, Ellwood, Burrell .
Miller, Devell
In Chief

1 Q What is Foothills' policy
2 regarding access to alcohol on construction sites?

3 A Our policy is one of controlled
4 access. We intend to provide taverns in all of our major
5 camps subject to the Territorial Liquor Ordinance or any
6 local regulations prohibiting or restricting possession of
7 sale of alcoholic beverages. We anticipate that the taverns
8 will operate for a limited time during the evenings and
9 they will be restricted to employees of Foothills or
10 contractors and sub-contractors and to authorized guests of
11 Foothills.

12 Q What is Foothills position
13 with respect to the availability of firearms in camp?

14 A Firearms, with the exception
15 of those provided to the camp superintendent for safety
16 purposes will not be permitted in the camp.

17 Q Has Foothills developed a
18 compensation policy to cover accidental damage during the
19 construction phase?

20 A Yes, the philosophy of our
21 compensation policy is basically that a person who has been
22 adversely affected should be compensated in such a manner
23 that he is equally as well off after the construction of the
24 pipeline as he was initially. As well he should not suffer
25 in any way because of any above ground facilities constructed
26 by the pipeline company, nor should he suffer in any way

1 should the pipeline cause him any damage during the entire
2 time it is in operation, or at anytime his land need to be
3 disturbed by our maintenance crew.

4 Q How would this policy be put
5 into practice by Foothills?

6 A As a practical matter it will,
7 of course, be necessary for anyone who feels he has a
8 legitimate claim against our company to bring the matter to
9 our attention. We recognize that this implies an obligation
10 on our part to make ourselves accessible and we propose to do thi
11 this by locating the persons responsible for settling the
12 damage claims in Yukon and by making their names, addresses
13 and telephone numbers known to the residents and organizations
14 of the region.

15 Once this initial contact has been
16 made we would expect the normal process of negotiation
17 between the claimant and our company to arrive at a mutually
18 agreeable estimate of the extent of damage. Compensation
19 would then be paid on the basis of replacement value for
20 damage to property and fair market value for loss of
21 productivity.

22 In addition compensation for
23 inconvenience, stress or other non quantifiable items is
24 expected to part of the negotiations in Yukon in the same
25 or similar manner as is the current practice in the rest
26 of Canada.

Littledale, Saker, Ellwood, Burrell
Miller, [unclear]
in Chief

1 O What plans does Foothills have
2 to provide employee housing?

3 A Because of limited housing
4 supply in the communities of Beaver Creek, Haines Junction,
5 Teslin and Watson Lake we will be providing company housing
6 or accommodation allowances as required in these centres.
7 The housing market in Whitehorse appears to have more than
8 sufficient capacity to meet our needs at this time and
9 therefore we do not anticipate any requirements for company
10 housing in Whitehorse. However a final decision on this
11 matter will be made after a review of the housing situation
12 after a permit is issued and prior to hiring of staff for
13 the operations phase.

14 MR. HOLLINGWORTH: Thank you, Mr.
15 Ellwood.

16 Mr. Miller, if I could turn to you
17 your evidence has been filed in the form of a study, but
18 I would just like to ask if the attached " c.v." to your
19 evidence properly sets out your qualifications both
20 academically and in employment.

21 MR. MILLER: Yes it does.

22 O I could just run through
23 that briefly sir. I understand that you are presently a
24 managerent-- an accounting consultant with your business
25 at 45 Pelly Road in Whitehorse?

26 That is correct.

Littledale, Saker, Ellwood, Burrell .
Miller, Devell
In Chief

1 Q And that you were born in
2 Melville Saskatchewan and went through school in Melville
3 and attended the University of British Columbia Extension
4 Course and the Society of Industrial Accountants of British
5 Columbia course in may of 1967?

6 A That is correct.

7 Q And that your employment
8 experience is as follows, the Royal Bank of Canada, 1955 to
9 1956 as a ledger clerk and teller. With Canadian Pacific
10 Airlines, 1956 to 1957 as a maintenance clerk. With the
11 British Columbia Telephone Company 1957 to 1969, as
12 progressively, an accountant clerk, cost accounting supervisor,
13 general accounting supervisor, financial planning and
14 analysis manager, and finally with the Government of the
15 Yukon, 1969 to 1977 as, progressively, chief Territorial
16 Accountant, Territorial Treasurer, and the Assistant
17 Commissioner in Administration?

18 A That is correct.

19 Q Your professional activities
20 included the Society of Industrial Accountants of British
21 Columbia as treasurer in 1967 and 1968, and vice president
22 in 1968 and '69 and the Society of Industrial Accountants
23 of Yukon where you were president from 1975 to 1977?

24 A That is correct.

25 Q Perhaps then, Mr. Miller, I
26 can then call upon you to go through your study and explain

1 it to the Board.

2 A In reading this into the
3 evidence if it is acceptable to the Inquiry I would propose
4 not to read the figures in except the total numbers rather
5 than read the whole column of figures

6 MR. CHAIRMAN: That is acceptable,
7 Mr. Miller.

8 A In the preparation of these
9 estimates I have made various assumptions due to the lack
10 of detailed data and preparation time. Whenever I have
11 made an assumption which could effect the estimate I have
12 so indicated in the narrative accompanying the estimate.

13 I have also taken a conservative approach
14 in estimating the revenues which could accrue to the
15 government and have attempted to overstate the expenditures
16 which might be incurred.

17 All dollar estimates are based on
18 1976 construction costs and on taxation rates in effect as
19 of April 1977.

20 As a general set of criteria on which
21 these estimates have been based I have assumed that the
22 applicant will adopt and adhere to the following policies.

23

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Littlelake, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

Number One - Hiring Policy

All non resident employees will be hired only through hiring halls located in southern Canada.

The Applicant will undertake an extensive advertising campaign in southern Canada to advise prospective employees of hiring practices, thereby attempting to discourage in-migration.

All workers will be housed in camps located apart from the communities and all non-resident staff will be encouraged to fly in and out of Yukon.

All camps will be fully equipped with recreational facilities, including taverns, thereby limiting out of camp travel.

Yukoners will be given equal opportunity for jobs available based on qualifications and all hiring of Yukoners will be handled through offices located in Yukon.

The Purchasing Policy.

All Yukon Companies will be given an equal opportunity to bid or quote on all projects which they qualify for.

Purchasing of goods and services will be based on competitive bidding practices with price, delivery and quality being considered before placing orders.

Under the general heading of Revenues Accruing to the Government of Yukon, this is broken into numerous parts, the first one being the Motor Vehicle

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 Ordinance.

2 This Ordinance makes provision for
3 the licensing of motor vehicles and the control of weights
4 and lengths of motor vehicles on the highways within Yukon.

5 License rates for large trucks are
6 \$940. per annum with smaller trucks (1/2 ton) being \$25. per
7 annum. Over-length permits are \$5. per vehicle over 65 feet
8 in length.

9 In the preparation of these estimates
10 I have used extensively the data from the Alaska Highway 48-
11 inch Pipeline Project Logistics and Requirements and Costs
12 Study prepared by Trimac Consulting Services Ltd. (April 1977)

13 Construction traffic revenues
14 included in these estimates are minimal in that no firm
15 indications are available as to the amount of motorized
16 equipment which will be required. As a conservative estimate
17 I would consider the project revenues to be understated by
18 at least \$100,000. over the period indicated.

19 The total Motor Vehicle Ordinance
20 Revenue for the period 1979 to 1983 is estimated at \$302,640.

21 The Fuel Oil Taxation Ordinance.

22 This Ordinance assesses a tax on
23 all fuel oil consumed in Yukon except fuel oil used for
24 generating electricity, heating of ore in a mining operation,
25 farming, etc. Rates of tax under the current Ordinance are:
26 diesel - 16¢ per gallon, gasoline - 14¢ per gallon and

Miller, Devell
In Chief

1 heating fuel - 1¢ per gallon.

These estimates are based extensively
on the data contained in the Alaska Highway 48-inch Pipeline
Project Logistics Requirements and Costs Study by Trimac
Consulting Services Ltd. (April of 1977).

6 For the total fuel required to be
7 brought into the Territory, I have assumed a distribution
8 of 80 per cent diesel and 20 per cent gasoline.

9 I have also assumed that for inbound
10 transportation of materials from Calgary, Fort Nelson, and
11 Haines, Alaska, that vehicle fuel oil would be purchased from
12 normal suppliers whereas on outbound trips, fuel would be
13 acquired from Foothills bulk facilities.

14 The total Fuel Oil Taxation Revenue
15 for the period 1978 to '83, is estimated at \$2,620,952.

Under the Taxation Ordinance, this Ordinance imposes a property and school tax mill rate on all real property located in Yukon. The general purpose mill rate for areas in the Yukon outside of municipalities is presently 22 mills, while the school tax mill rate is 16 mills on all property in the Yukon. Municipalities levy their own mill rate, with the Whitehorse mill rate for 1977 being 29.2 mills.

24 The Assessment Branch of the Department
25 of Local Government does all the assessments in Yukon based
26 on the Alberta Assessment Manual.

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Jittledale, Saker, Ellwood, Burrell
Miller, Doyell
In Chief

1 While there is a new assessment
2 being completed which will update values to 1976 market value,
3 estimates for this study have been based on the previous
4 assessment methodology, which is, effective assessment rates
5 for land are approximately 50 per cent of 1976 market value
6 and for improvements approximately 21 per cent of 1976
7 construction costs.

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 The total Taxation Ordinance revenue
2 for the period 1978 to '83 is estimated at \$10,745,500.00 .

3 Under the Liquor Ordinance, the
4 consumption of alcoholic beverages has been estimated to be
5 one 25 ounce bottle of spirits or one case of beer, per
6 employee, per week, and that 20 per cent of the employees will
7 not consume alcohol.

8 Liquor profit has been projected
9 based on historical cost and profit data with surcharge
10 rates being those in effect as of April 1977.

11 Sales prices used are average price
12 per bottle of bar spirits, with beer prices based on the
13 April 1977 announced prices.

14 The total Liquor Ordinance Revenue
15 for the period 1978 to '83 is estimated at \$297,975.00

16 Under the Tobacco Tax Ordinance,
17 this Ordinance imposes a tax of 2/5 of 1¢ per cigarette and
18 various equivalent rates for other tobacco products.

19 In preparing these estimates, this
20 estimate, I have assumed an average consumption per smoker
21 of 25 cigarettes per day and a ratio of smokers to non-smokers
22 of 60 per cent, giving the total Tobacco Tax Revenue for the
23 period 1978 to '83 of \$73,493.00

24 Under Income Tax, while the
25 Government of Yukon does not impose a Territorial Income Tax,
26 the Income Tax Act of Canada specifies, for residents of Yukon,

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 tax rates for individuals of 30 per cent of the Federal
2 basic tax payable and for corporations 10 per cent of the
3 taxable income earned in the Territory. These taxes are
4 remitted to the Government of Yukon as a grant in lieu of
5 income tax based on the following formulae:

6 The Individual Taxation, they used
7 the 1977, and I've used this as an example, the estimated
8 Tax for Canada, times the tax collected in 1975 in the Yukon,
9 over the Tax collected in 1975 in Canada, equalling a grant
10 in lieu of Income Tax.

11 In the case of Corporate Taxation,
12 the only difference is in the use of one year earlier data.
13 In other words they use, for 1977, they would use 1974 as
14 the base.

15 If the Government of Yukon were to
16 impose it's own Income Tax there would be little change in
17 the above calculations, however, there would be an adjustment
18 of the difference between tax estimated for a particular
19 tax year and the actual tax collected in that tax year. This
20 adjustment would be made when actual figures are available.

21 The estimated Income Tax Revenues
22 which follow are based on a maximum of 400 Yukoners working
23 throughout the construction period, that Yukon companies will
24 supply \$35 to \$65 million worth of goods and services and
25 that pipeline contractors will report \$40 million of
26 revenue earned in Yukon, in filing their Income Tax Returns.

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 The total Income Tax Revenue for
2 the period 1981 to 1983 is estimated at \$3,682,191.00

3 Under the Land Ordinance, the
4 Land Ordinance imposes terms and conditions under which land is
5 sold.

6 The Government's policy on subdivided
7 land for residential use is to recover the cost of servicing
8 the land. On other lands not requiring servicing the price
9 is established by appraisal.

10 Quarry fees are based on the April
11 1977 fee of 10¢ per cubic yard of granular material.

12 The following land revenues are
13 based on Foothills Pipeline (Yukon) Ltd. cost estimates which
14 appear to fairly represent the prices prevalent in Yukon
15 today.

16 The total estimated Revenue from
17 land for the period '78 to '83, is \$1,671,000. and for
18 quarry fees, \$23,020.00
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Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
In Chief.

1 this size in not expected to result in increased costs for this
2 Department. This assumption is based on the fact that in spite
3 of the large traffic volumes emanating from the Aleyska Pipe-
4 line, there was no measurable effect on highway maintenance
5 costs.

6
7 On the Department of Local Govern-
8 ment, the major cost which this Department will incur are those
9 resulting from the development of land necessary for housing
10 the pipeline workers. As the majority of land outside of com-
11 munities is controlled by Federal Government, little on no
12 impact on the Government of the Yukon can be expected from
13 pipeline right-of-ways, construction camps, etcetera. As
14 indicated in the ^{City of} Whitehorse section of this report, with the
15 current land development program of some 691 lots, no expansion
16 of services may be necessary, however, for estimating purposes
17 I have assumed that land development costs will equal to the
18 revenues to be received will be incurred, giving a total land
19 development cost for the period 78 to 83 of \$1,407,000.00.
20 I have also estimated, based on present staff and the additional
21 properties which will require assessment, that an additional
22 assessor may be necessary commencing in 1980, giving total
23 assessment services costs for the period of 1980 to '84, of
24 \$112,000.00.

25 On the Department of Territorial
26 Secretary and Registrar General, the major impacts on this
Department will be in the inspection and safety fields. In

Littledale, Saker, Ellwood, Burrell, ' Miller, Deyell.
In Chief.

1 this regard, and considering the present staff complement, I
2 have estimated a need for one additional inspector during the
3 construction phase to deal primarily with the labour standard
4 complaints. Total inspection services costs for the period
5 1979 to '82, \$47,200.00.

6 Under Health Services, while there
7 are estimated to be 95 hospitalized accident cases during
8 construction, no cost should be incurred by the Health
9 Services Branch, as these costs should be paid for by Work-
10 men's Compensation. However, it is expected that public
11 health duties may increase necessitating the additional
12 one Public Health nurse. Under Public Health, the Government
13 of the Yukon pays 70 percent of the total cost, so the cost
14 to the Government of the Yukon for the period '79 to '82, would
15 be approximately \$24,000.00.

16 Under Police Services, the RCMP
17 provide police services throughout the Yukon under a cost
18 sharing agreement with the Government of Yukon. As the
19 construction workers will be located in camps apart from
20 communities, it is not expected the crime rate will increase
21 in any substantial number. However, in view of the size of
22 the smaller detachments, I have assumed that while construc-
23 tion camps are operating in the vicinity of the smaller
24 communities, additional manpower may be necessary to ensure
25 public safety. These estimated costs for the period 79 to 82
26 are \$65,100.00, as a cost to the Government of the Yukon, which
is under the form of cost sharing formula.

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief

1 Education, as the applicants policy
2 for hiring of staff will discourage families from moving to
3 the Yukon during the construction phase, it is anticipated
4 that there will be no impact on the public school system
5 during this period.

6 With the operation and maintenance
7 plan of only 189 employees being required and assuming a
8 population multiplier of 2.3 to 1, it is unlikely that any
9 major impact will occur in any of the schools along the
10 pipeline route, however, it is possible that additional
11 teachers may be required in the smaller schools, therefore
12 provision is made for an additional two teachers, with an
13 estimated cost for the period of 1981 to '84 of \$124,000.

14 The overall financial effect, based
15 on the preceding factors from the Government of Yukon can
16 be summarized as follows:

17 Total revenue for the period 1978 to
18 '83 of \$17,745,771., expenditures of \$710,000., giving a net
19 effect of \$17,035,771.

20 I have excluded the land development
21 costs in revenue as land is developed using borrowed
22 money repayable from land proceeds.

23 The net estimated effect, revenue
24 effect, on the Government can then be compared with the
25 present Government sources of Revenue, and in this case I
26 have attached a table outlining the present financial make-up

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 or sources of income of the Government of Yukon. If
2 we assume that the local generated revenue (which is Revenue,
3 Recoveries and Transfer Payments) remain proportionate to
4 the total income and expenditures, the net revenue generated
5 from this pipeline proposal will reduce the grants receivable
6 from the Government of Canada to approximately 50 per cent.

7 Based on these assumptions, by 1985
8 when Income Tax Revenues are expected from Foothills Pipeline
9 (Yukon) Ltd., grants required from the Government of Canada
10 should be for capital expenditures only.

11 Under the Revenues Accruing to the
12 City of Whitehorse, the Property Taxation is the main one,
13 and it is the only one that I have estimated.

14 The General Purposes Taxation Bylaw
15 imposes a mill rate in 1977 of 29.2 mills on all real property
16 located within the City of Whitehorse.

17 Assessments of property are done by
18 the Government of Yukon assessors on the same criteria as
19 used for all property in the Yukon. As a reference point,
20 you can see the Taxation Ordinance section of Revenue Accruing
21 to the Government of Yukon.

22 The 1977 assessments have been
23 completed on the basis of approximately 50 per cent of
24 1976 land market value and approximately 21 per cent of 1976
25 construction costs, giving a property Taxation Revenue
26 estimated for the period 1979 to 1983 of \$99,000.

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 Under the Expenditures to be made
2 by the City of Whitehorse, in assessing the possible expendi-
3 tures which might be required by the City of Whitehorse, I have
4 considered the infrastructure presently in place and the
5 expansion which the City has undergone in the past few years.

6 I have assumed for these purposes
7 the direct employment related to the pipeline, is estimated
8 to 101 jobs, and a total population increase of approximately
9 250 to 325 people.

10 The major impact on the City would
11 be an additional maximum of 101 housing units resulting in
12 increased pressure on the fire department, on recreation
13 facilities, additional sewer and water maintenance, garbage
14 collection, and street maintenance.

15 In view of the land development
16 projects presently under way of 691 lots and the current
17 apartment vacancy rate of 136 or 20.6 per cent of available
18 units, it would appear that the City could absorb all of
19 the direct pipeline employment without incurring any further
20 costs.

21 The Revenues Accruing to and
22 Expenditures Incurred by Other Communities, in assessing the
23 possible financial impacts on the smaller communities I have
24 reviewed the government structures in all communities and
25 the infrastructure currently in place or under construction.

26 In the communities of Haines Junction,

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 Teslin and Watson Lake, the Local Improvement District Boards
2 have operating and planning control of the local services
3 available. These services include water and/or sewer service
4 either by piped system or trucked service, street lighting
5 and road maintenance.

6 Beaver Creek is the only community
7 which does not have a community water and sewer system although
8 the government and some private facilities have well and
9 septic tank facilities. Street lighting and road maintenance
10 are provided by the Government of Yukon.

11 Additional costs on community services
12 from the increase of some 22 workers and their families should
13 be minimal and more than offset by user fees which would be
14 assessed.

15 In fact, an increase of families
16 should provide financial benefits to these communities in
17 that the costs of services will be spread over a larger
18 base, for example, the television service in Teslin, Haines
19 Junction, and Beaver Creek could be reduced by as much as
20 one third.

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Littledale, Saker, Ellwood, Burrell
Miller, Foyell
In Chief

1 Under Inflationary Trends Which may
2 be Generated by the Alaska Highway Project, to adequately
3 assess the possible inflationary trends which may be generated
4 by the Alaska Highway Pipeline Project it is necessary to have
5 an economic picture of the Yukon today.

6 Unlike many of the provinces there
7 is no economic model available and Statistics Canada
8 provides little data on Yukon thereby making it difficult to
9 quantify much of our economy.

10 However, in a general sense the
11 economy of Yukon is comprised of the following major
12 components.

13 a) The mining industry with
14 revenues in 1974 of \$123.7 million and direct employment of
15 1,294 workers. Wages and salaries paid to direct employees
16 in this sector represent approximately 24 per cent of the
17 total wages and salaries paid in Yukon with an additional
18 1,400 workers in support industries bringing the total work
19 force dependent on this industry to 2,700 or about 30 per cent
20 of the total Yukon work force.

21 b) Tourism with an estimated
22 value in 1974 of \$24. million, and approximately 340,000
23 visitors. This sector represents approximately 1,600 man
24 years of employment in direct and the support service and
25 supply industries.

26 c) Government with estimated

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 expenditures of approximately \$103. million and direct
2 employment of about 2,640 man years in 1975/76.

3 d) The transportation, retail
4 trade and general service industries with rail and truck
5 facilities handling outbound tonnage of 635,000 tons in 1972
6 and inbound tonnage of 288,000 tons. The retail trade
7 sector is comprised of about 400 commercial establishments
8 with approximately \$43.3 million in sales.

9 Based on the present Yukon economic
10 situation, the factors emanating from a gas pipeline project
11 which could cause inflationary pressures are the demand for
12 goods and services and the labour requirements and wage rates.

13 In the preparation of this assessment,
14 I have assumed that the Applicant will adhere to the hiring
15 and purchase of goods and service policies enunciated
16 earlier in this report.

17 I also consider that the construction
18 phase, when some 500,000 tons of material are required and
19 approximately 2,300 workers are needed, will be the period
20 when the inflationary impact could be at its highest potential.

21 Under Demand for Goods and Services,
22 the Alaska Highway 48-inch Pipeline Project Logistics
23 Requirements and Costs Study prepared by Trimac Consulting
24 Services of April 1977 indicates total material requirements
25 of some 544,000 tons over the construction phase. Of this
26 total, some 371,000 tons of pipe are intended to be handled

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 by dedicated transport equipment leaving approximately 173,000
2 tons to be handled by common carriers. As indicated under
3 the transportation sector of the Yukon economic picture,
4 the existing transportation industry now handles some 600,000
5 outbound tons per annum and 288,000 inbound tons. It
6 therefore appears that no major transportations problems
7 should be encountered.

8 Notwithstanding the transportation
9 capabilities, it may be expected that with commencement of
10 construction that the sudden increases in the demand for
11 goods and services coupled with a rise in disposable income
12 will cause upward pressure on prices.

13 It is an accepted fact that in Yukon
14 prices for goods and services are higher than elsewhere in
15 Canada. Many reasons are given for these higher prices
16 including higher transportation costs, lack of competition,
17 etc. It is also common knowledge that Statistics Canada does
18 not provide consumer price surveys for Yukon, therefore,
19 there is no definitive measure of prices.

20 However, in June 1976, a Spatial
21 Price Comparison Survey of Selected Alberta and Yukon
22 Communities indicated that food prices were 34.7 per cent and
23 non-food items, such as household operations, clothing,
24 transportation, health, recreation, and leisure were
25 12.5 per cent above Edmonton prices. By comparison the
26 average weekly composite wage for Alberta in November 1976

1 was \$247.32, while the Yukon wage was \$327.05, a 32.2 per
2 cent difference.

3 Since June 1976, it would appear
4 that at least certain prices in Whitehorse have decreased
5 in relative terms, due to increased competition.

6 For example, two new grocery stores,
7 one clothing and supply store, one shoe store and one furniture
8 store.

9 In the same period, house prices
10 and apartment rentals have decreased by approximately 10
11 per cent reflecting a substantial over-supply. Apartment
12 vacancies in April 1977 were 136 units or 21 per cent of
13 total units surveyed.

14 It would be my contention that any
15 price increases emanating from a pipeline project should be
16 moderate due to better utilization of existing productive
17 capacity and a higher turnover of inventories.

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Miller, Deyell
In Chief

1 The productive capacity for goods and
2 services have been built to serve the mining industry which
3 operates year round and the tourist industry, which functions
4 for 120 days per year.

5 The influx of some 300,000 visitors
6 between May 15 and September 15 or an average of 2,300 per
7 day receiving transportation, food, lodging, et cetera,
8 leaves a productive capacity for 240 days of approximately
9 30 - 40 per cent of total capacity available.

10 As productive capacity is now under-
11 utilized during the high cost months, fixed costs must be
12 spread over lower sales than total capacity would permit,
13 thereby increasing costs per unit of sale .

14 If the demand for goods and services
15 increases it should result in higher turnover of inven-
16 tories thereby reducing inventory costs and permitting a
17 lower sales price. This could also result in lower trans-
18 portation costs as common carrier tariffs are based on
19 reducing weight scales. For example, the transportation
20 rates for 100 pounds of general freight from Edmonton to
21 Whitehorse by truck can vary from \$17.25 for a 100 pound
22 shipment to \$6.50 per hundred for a 40,000 pound load.

23 Under Labour Requirements and Wage
24 Rates, the total estimated manpower requirements during the
25 construction phase, range from 20 during the winter of 1979
26 to a maximum of 2,300 during the summer of 1980. During

Littledale, Saker, Ellwood, Burrell
Miller, Dwell
In Chief

1 the peak construction period of summer of 1979 this would
2 represent about 20 per cent of the total Yukon work force.

3 As pipeline construction requires
4 specialized skills it has been estimated that approximately
5 35 per cent or 800 workers of the peak manpower requirements
6 would need to be brought into the Yukon. This leaves 65 per
7 cent or 1,600 jobs available to Yukoners. An analysis of
8 the unemployment statistics in 1976 indicated that approxima-
9 tely 600 people hold skills necessary to be employed on the
10 pipeline project. Assuming that all 600 of the unemployed
11 were to seek employment on the project there would still be
12 a deficiency of some 1,000 workers.

13 A further influx of 1,000 workers
14 would therefore be necessary to fill the vacant positions.
15 This in itself is not unusual in Yukons' history and would
16 appear to present few major problems. The major concern to
17 Yukoners will be: the diversion of workers from existing
18 jobs, the higher wages and the over-time incentives offered.

19 However, I suspect that there will
20 be little overall impact on the Yukon labour force as the
21 majority of Yukoners are unlikely to trade a permanent job
22 with an established future for a short term gain.

23 The actual pipeline construction
24 scheduled now indicates approximately 16 months of work
25 commencing May, 1979, with completion in April, 1982, some
26 23 months later. This leaves 7 unproductive months during

Littledale, Saker, Ellwood, Burrell
Miller, Dyell
In Chief

1 this 23 month period. This in itself will discourage many
2 permanently employed Yukoners.

3 The higher wage rates offered by
4 the pipeline contractors and the overtime incentives will in
5 my view be attractive to the unskilled, transient type of
6 worker. This may cause short term labour shortages to
7 those Yukon industries which presently rely on this type of
8 employee. However, I would suspect that these shortages
9 would not be of major consequence as these industries are
10 accustomed to a high turnover and manpower shortages from
11 time to time.

12 The Effect on Personal Income of
13 Yukon Residents, the personal income of Yukoners could be
14 adversely effected by a project of this size and nature as
15 a result of the demand for goods and services causing
16 inflated prices, demand for labour and higher wages being
17 paid causing major disruptions in the existing Yukon labour
18 force --

19 MR. CHAIRMAN: Excuse me, is there
20 anyone having difficulty hearing at the back of the hall?

21 All right.

22 A ...And inflated wage rates
23 being required to maintain essential services.

24 Conversely, positive effects on per-
25 sonal income can be realized if the unemployed segment of
26 the work force takes advantage of the employment opportuni-

Littledale, Saker, Ellwood, Burrell
Miller, Dwell
In Chief

1 ties and if Yukon businessmen seek and obtain contracts
2 for goods and services required both in the construction
3 and operation phases.

4 As indicated earlier in this report,
5 it is my view that there should be limited or no effect on
6 prices as our transportation and supply system is more than
7 adequate to supply a project of this size. In fact, there
8 may be benefits obtainable by better utilization of exist-
9 ing productive capacity and a higher turnover of inventory.

10 I also contend that labour demands
11 and wages will not have a major impact on existing Yukon
12 companies as it is unlikely that many Yukoners will trade a
13 permanent position with an established future for a short-
14 term employment gain.

15 On the positive side, if 400 of the
16 unemployed seek and obtain work either on the pipeline
17 construction or to replace other employees who seek pipeline
18 work, estimated total income of \$15,000,000.00 could be
19 earned, thereby producing some \$1,000,000.00 dollars worth
20 of income tax rebate to the Government of Yukon and approxi-
21 mately \$13,000,000.00 worth of disposable income into the
22 Yukon economy.

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Miller, Deyell
In Chief

1 In addition, if Yukon contractors
2 and businesses bid and obtain \$35-65 million of work and
3 supply of goods, additional income tax of some \$650,000.
4 should accrue to the Government of Yukon through rebates and
5 at least \$3 million of additional income should be available
6 for plant expansion or improvement or for disposable income
7 thereby generating additional employment opportunities, etc.

8 In the operation and maintenance phase
9 the permanent employment of some 189 workers will create
10 additional employment opportunities for Yukon residents and
11 could also provide some positive benefits to the smaller
12 communities by increase the purchase of goods and services from
13 small businesses. The increased purchasing and turnover of
14 inventory should thereby reduce prices. It is also likely
15 that additional families in small communities will reduce
16 the per capita costs of recreational and other facilities.

17 In summary, I see few negative effects
18 on the personal income of Yukoners while the opportunity
19 exists for many to benefit through employment and by
20 supplying goods and services both during construction and
21 in the operative phase.

22 MR. CHAIRMAN: Thank you, Mr. Miller,
23 I was wondering if this wouldn't be a convenient time to take
24 a break, for a few minutes.

25 MR. HOLLINGWORTH: That would be
26 fine sir.

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 PROCEEDINGS ADJOURNED

2 PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT

3 MR. HOLLINGWORTH: Thank you, we're
4 ready to proceed now, with Mr. Littledale.

5 Mr. Littledale, you are Vice-President
6 of Operations and Maintenance at Foothills PipeLines Ltd.?

7 MR. LITTLEDALF: Yes, I am.

8 Q Does the attached sheet
9 having your name at the top accurately describes your
10 academic qualifications and experience?

11 A Yes, it does.

12 Q And briefly, sir, that
13 states that you were educated at an indentured engineering
14 apprenticeship in Rugby, England, and that you were a
15 certified engineering technologist in the Province of British
16 Columbia, and that your work experiences employment with
17 Bechtel/Wimpey on a 556 mile pipeline project from 1950 to
18 '52 in the Middle East in the engineering and construction
19 field. That you were later employed by Inter-provincial
20 Pipeline Company in Canada, 1952 to 1957, in engineering and
21 construction; and 1957 to 1963 in Operations, and after that
22 you were employed by Western Pacific Products and Crude Oil
23 Pipelines in Canada, in 1963 to 1966 as Assistant Superintendent
24 of Operations for six months, and Superintendent of Operations
25 for three years, and that from 1966 to the present you have
26 been employed by Westcoast Transmission Company in various

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 capacities as Assistant Superintendent of Transmission,
2 Superintendent of Transmission, Manager of Southern District,
3 Manager of Transmission, and Manager of Process and
4 Construction, and that on October 1st, 1975, you were also
5 appointed the Vice-President of Operations for Foothills
6 Pipelines Ltd. Is that correct, sir?

7 A That is correct.

8 Q Mr. Littledale, for the
9 operations phase, has Foothills forecast the number of
10 positions which could be filled by local residents?

11 A Yes. We have made a
12 forecast by job category of the number of personnel which
13 would required to operate and maintain the pipeline. Following
14 that, we determined those positions which must be filled
15 by experienced personnel and those positions which could be
16 filled by trainees. This forecast was made with the aid
17 of experienced O & M personnel from our two sponsoring
18 companies.

19 In filling jobs, local residents
20 will be given preference and all trainee positions could be
21 filled by local residents.

22 It is highly probable too, that such
23 positions as carpenters, automobile mechanics, plumbers,
24 electricians, fabrication welders, equipment operators,
25 pilots and secretaries, as examples, which are classified as
26 "experienced", but do not require skills special to a natural

Littledale, Saker, Fllwood, Burrell
Miller, Deyell
In Chief

1 gas pipeline system, can also be filled by local residents
2 who possess the required experience and qualifications.

3 The forecast shows that of the 189
4 permanent operational phase positions with the pipeline, 94
5 or approximately 50 per cent are classified as training
6 positions. Should Foothills receive the necessary approvals
7 to construct and operate a proposed pipeline, we intend to
8 provide the additional phase training through an expanded
9 Nortran program.

10 We have been assured by our two
11 sponsoring companies, Westcoast Transmission Company Limited
12 and the Alberta Gas Trunk Line Company Limited, that when we
13 receive the necessary approvals to construct and operate our
14 proposed pipeline, they will make the on-job training positions
15 we require available to us.

16 We intend to place the trainees
17 with these two pipeline operating companies until such time
18 as our pipeline goes into operation. At that time most of
19 the on-job training will be transferred to the Yukon.

20 The Foothills training program will
21 be an ongoing career development process directed towards
22 upgrading the skills of its personnel, thus providing them
23 with the opportunity to advance to positions of increased
24 responsibility, which would include supervisory and managerial
25 positions.

Littledale, Saker, Ellwood, Burrell,
Miller, Devell, .
In Chief.

1 Q Mr. Littledale, what
2 training position will Westcoast Transmission be making
3 available to Foothills?

4 A In discussions with West-
5 coast Management personnel, they have said Westcoast could pro-
6 vide on-the-job training for up to the following numbers of
7 trainees within their pipeline operations and maintenance
8 department.

9	Pipeline Maintenance Men	15
10	Compressor Maintenance Men	40
11	Controls Technicians	6
12	Mechanical Technicians	25
13	Warehousemen	5
14	Apprenticeship Trainees	10
15	Clerical and Stenographic	10

16 A comparison of the number of train-
17 ing positions available in Foothills, with the training po-
18 sitions which AGTL and WTCL are prepared to provide, shows
19 that more than enough training positions would be available
20 in the existing operating companies to satisfy the Foothills'
21 requirements.

22 Q Do you believe these
23 trainees could be sufficiently trained between the time the
24 permit is issued and the time they are required for operation
25 of the Foothills' pipeline?
26

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
In Chief.

A Operators, maintenance men, warehousemen, clerks, and administrative staff could be sufficiently trained in that time frame. All tradesmen such as welders, mechanics, electricians, etcetera, who have apprenticeship programs to complete that range from 3 to 4 years obviously could not unless they had some prior training that would reduce the time required to get their journeyman ticket . Controls, computer and measurement technicians do not require journeyman tickets and their apprenticeship time period is set by the company. Their program could be condensed to fit the available time frame.

Q Would you agree with the statement that the long term success of your hiring and training programs will depend on the development of employment policies and procedures which are acceptable to your employees?

A Certainly, as a result of more than twenty years of operating experience in Alberta and British Columbia both of our sponsor companies have established methods whereby their employees have input into operating policies and procedures of the company. I am confident that a continuation of this practice, will ensure that policies and procedures can be developed which are mutually acceptable to the employees and company management.

Q Would you describe the method by which the Company policies and procedures are established in the area of employee-employer relations?

A For now, Foothills has

We consider the active involvement of our employees in determining the operating policies and procedures of the company to be a key element in successfully hiring and retaining our staff and it is our intention to use a similar approach in the Yukon.

Littledale, Saker, Ellwood, Burrell,
Miller, Beyell.
In Chief.

1 Q What has Westcoast's
2 experience been at Fort Nelson which is an Alaska Highway
3 community 100 miles south of the 60th parallel?

4 A Westcoast operates one of
5 the largest Gas Processing plants in the world combined with
6 a Sulphur Plant 15 miles south of Fort Nelson. It also
7 operates and maintains an extensive gas gathering system which
8 extends to the East and North and into the Yukon at Beaver
9 River and Pointed Mountain in the Northwest Territories.
10 Westcoast also operates two compressor stations in the Fort
11 Nelson area which have approximately 60,000 horsepower
12 installed.

13 Westcoast has a regular complement
14 of 132 personnel in Fort Nelson servicing the Plant, Com-
15 pressor Stations and Pipelines.
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Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief.

1 The company has provided its employees
2 with company housing at subsidized rents. It has also pro-
3 vided its employees with the opportunity for home ownership
4 through a generous housing incentive plan for those that
5 desire.

6 The Company has also made contribu-
7 tions to the community in the areas of recreation, medical
8 and dental services and site development for housing.

9 Westcoast employeess have been actively
10 involved in community affairs over the years and the inte-
11 gration with the community has been harmonious and success-
12 ful.

13 The Company has operated in the area
14 since 1963, and has seen many beneficial changes and improve-
15 ment in that period of time. I cannot see why the Westcoast
16 experience should not be duplicated at any other Alaska High-
17 way community, should the pipeline be built.

18 Q Thank you, Mr. Littledale.

19 Mr. Deyell, turning to you, you are an
20 officer of the Alberta Gas Trunk Line Ltd?

21 MR. DEYELL: Yes, I am.

22 Q What office do you hold?

23 A I am Senior Vice President of
24 the Company, responsible for engineering, construction,
25 operations and human resources and I am also a Director of
26 the Company.

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief

1 Q Sir, does the attached "C.V."
2 properly set out your academic and work qualifications?

3 A Yes, it does.

4 Q Just going through that briefly,
5 sir, I understand that you have graduated from the University
6 of Toronto in 1951, with a Bachelor of Applied Science in
7 civil Engineering?

8 A Yes.

9 Q And that your work experience
10 started in 1951, extending to 1959, with Canadian Bechtel
11 and with Dutton-Williams-Mannix, in various positions of
12 engineering and construction of major oil and gas transmis-
13 sion systems in Canada and that following that time, at the
14 present, you have been with the Alberta Gas Trunk Line Com-
15 pany Limited as, progressively, Chief Engineer, Manager of
16 Operations, Vice President, Senior Vice President?

17 A That is correct.

18 Q And that your professional
19 affiliations include the Association of Professional En-
20 gineers, Geologists, and Geophysicists of Alberta; The
21 Engineering Institute of Canada; the Canadian Petroleum
22 Association; and the Canadian Gas Association?

23 A That is correct.

24 Q Mr. Deyell, what involvement
25 have you had with a northern training program?

26 A I have been involved since the

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
In Chief.

1 summer of 1970, when Alberta Gas Trunk first conceived its
2 northern training program. I was directly responsible for
3 the planning, organization and development of the program
4 from its inception until late November, 1970, when Art
5 Giroux, then a resident of Fort Simpson, was hired to manage
6 and further develop it.

7 Diring the period when the training
8 program was totally within Alberta Gas Trunk, I continued
9 to be responsible for its policy and overall direction. Fol-
10 lowing the merger of the Gas Artic Systems and Northwest
11 Pipeline Study Groups to form the Canadian Artic Gas Pipeline
12 Study Group, responsibility for the training was transferred
13 to CAGPL and I became Alberta Gas Trunk's representative
14 on the Steering Committee.

15 Later, I was involved in the negotia-
16 tions which resulted in the formation of NORTRAN. I remain-
17 ed a member of the NORTRAN Sterring Committee until recently,
18 when I became an alternative to Charlie McCall, Alberta Gas
19 Trunk's Manager of Gas Transmission. Although I am not an
20 active member of the Sterring Committee now, I still maintain
21 a high level of interest in the program.

22 Q Mr. Deyell, why did Alberta Gas
23 Trunk form the Northern Training Program?

24 A From the commencement of our
25 operations in 1957, we have steadfastly pursued a policy of
26 local hire. We believe, and this is proven by our operating

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief

1 experience, that residents of any area in which a pipeline
2 company operates provide the most stable work force.

3 In early 1970, Alberta Gas Trunk con-
4 ducted community meetings in villages in the North. The
5 residents of the communities expressed a strong interest in
6 working on the construction and even more in the ultimate
7 operation of our proposed pipeline. Our initial contacts
8 were made at that time because we knew that it would take
9 time to train northerners in skills required for operating
10 and maintaining pipelines. As we were then preparing to be
11 in operation as early as 1975, we recognized the urgency of
12 the training task.

13 The program grew out of consultations
14 that I had in Whitehorse with the late Jack Bredin of the
15 Vocational Training Centre, Peter Frankish of Indian Affairs
16 and Jack Roddis of Canada Manpower, as well as Territorial
17 Government personnel in Yellowknife and Federal Government
18 personnel in Ottawa.

19 Q Are you satisfied with how the
20 NORTRAN program has worked to date?

21 A Yes, I am. It is gratifying
22 to me to see the results in terms of the numbers of trainees
23 who have successfully learned oil and gas industry skills
24 within Alberta Gas Trunk and the other sponsoring companies.

25

26

1 Q Having been involved with a
2 northern training program for over six years, what is your
3 assessment of the program?

4 A Although the epilogue to
5 the training program for northerners cannot yet be written,
6 the results to date are gratifying to all of us who are
7 involved. It is a good start and encourages us to strive
8 to make the program even better.

9 As of the end of April, 1977, Alberta
10 Gas Trunk had 25 permanent training positions. We also
11 arranged for 15 training positions last summer for work
12 on construction of our pipelines and compressor stations
13 and we are intending to do the same this year. The program
14 commenced with 16 men, five from the Yukon, nine from the
15 Northwest Territories and two from extreme northern Alberta.
16 Of the original 16 men that started with us in January 1971,
17 seven are still with us. Many of the others brought into
18 the program since that time have been with us for over three
19 years.

20 Among the more successful trainees,
21 one is a counsellor, Rick Baine from Whitehorse, who will
22 be here as a Nortran witness, one is a journeyman welder, with
23 both an A and B ticket, and this is Rick's brother Wilf,
24 three are journeyman controls technicians, eight are
25 qualified pipeline operators, and one is a measurement
26 technician. Most of the qualified technicians and operators

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 have successfully taken courses, both academic and vocational,
2 to enable them to complete their training.

3 Q Mr. Deyell, from Alberta Gas
4 Trunk's standpoint, why do you believe you have been
5 successful with the Northern Training Program?

6 A It's difficult to quantify
7 the reasons, but I believe that the attitude of the company
8 from the President on down was very significant. Our President,
9 Mr. Blair, whole-heartedly and enthusiastically encouraged
10 us in the planning and development stage and adopted an
11 attitude that the program must work and failure would be
12 completely unacceptable. This attitude was universally
13 adopted and practiced throughout the Company.

14 Another important reason, would be
15 our choice of the direct supervisor. Our travels in the
16 North and meetings with natives led us to the conclusion
17 that the supervisor must be a northerner who understands the
18 North, its people and the environment. In some cases this
19 person would be called upon to be friend, confident, mother-
20 hen and overseer, as well as being supervisor. We found
21 such a person in Art Giroux, and he deserves considerable
22 credit for the success of the program.

23 Prior to implementation, we
24 discussed the program with our supervisors and regular employees
25 that would be closely associated with the trainees and
26 solicited and received their dedicated support for it.

1 The trainees and their families
2 were made to feel at home and were accorded all the same
3 rights, privileges, etc. that our regular employees had. On
4 a personal note, I visited the initial group of 16 at Rocky
5 Mountain House and held bull sessions with them in a very
6 informal manner. My office in Calgary was always open to
7 them to visit with me without notice and I was always
8 available by telephone if they wished to talk. It was all a
9 part of trying to make them feel wanted and accepted on the
10 same basis as the southerners.

11 The trainees were guaranteed
12 permanent jobs with the Company. They were advised that we
13 would encourage them to return north to the pipeline when
14 constructed, but would not insist on it. In other words,
15 they would be permanent employees of Alberta Gas Trunk as long
16 as they wished to be. Apart from subsidized vacation time,
17 accommodation and travel expenses, they were not accorded
18 special privileges over and above what regular southern
19 trainees were accorded.

20 Q Mr. Littledale said earlier
21 that Alberta Gas Trunk and Westcoast had assured Foothills
22 they would make sufficient job training positions available
23 to enable Foothills to provide pipeline on-the-job-training
24 to all it's trainees prior to the Foothills' pipeline
25 becoming operational. Would you comment on this statement
26 please?

Littledale, Saker, Ellwood, Burrell
Miller, Deyell
In Chief

1 A That is true. Both
2 Westcoast and ourselves have reviewed the Foothills' training
3 position requirements and we see no difficulty in making this
4 number of positions available. Since Foothills intends to
5 follow the Nortran program format, it's just a case of
6 expanding upon what we are presently doing and we are prepared
7 to do this as soon as Foothills receives the necessary permits
8 to construct and operate its pipeline. We see little problem
9 in doing so. Alberta Gas Trunk now has a field pipeline
10 operating and maintenance staff in excess of 600, and we
11 operate from four district headquarters, each of which has
12 one or more sub-district offices. Each of these offices has
13 a maintenance crew, ranging from six to twenty.

14 If necessary, we could add at least
15 two trainees to each of these crews to accommodate a total
16 of 25 pipeline maintenance trainee positions. In addition,
17 we operate 29 compressor stations in our system, trainees
18 could be added to compressor station operating crews to
19 provide on-the-job training in compressor station operation
20 and routine maintenance.

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Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief

1 We have about 135 controls, automation
2 and measurement technicians on staff. If necessary, we could
3 place trainees with these technicians in a ratio of approxi-
4 mately one to two and thereby train 60 to 70.

5 We have five mechanical technician
6 crews with approximately six per crew, plus a machine shop and
7 overhaul shop. We would have no difficulty adding trainees
8 to each of these crews and shops for a total of twelve to
9 fifteen mechanical trainee positions.

10 Warehouse trainees could be placed
11 into the existing warehousing facilities in Calgary and
12 Edmonton as well as with materials men on Alberta Gas Trunk
13 construction projects.

14 As for automobile mechanics, welders,
15 and electricians positions, we already have northern train-
16 ees involved in apprenticeship training. How the new train-
17 ees would fit into the apprenticeship program would be dif-
18 ficult to say right now without knowing the educational
19 back-ground and work history of the candidates. To qualify
20 for entrance to these, in most cases, required at least a
21 Grade 10 education plus industrial mathematics and science.
22 As has been the case with our present northern trainees who
23 have pursued an apprenticeship program, it may prove neces-
24 sary for the new candidates to first upgrade their education.
25 The decision to do so, of course, lies with the candidate.

26 As for clerical and stenographic staff,

Littledale, Skaer, Ellwood, Burrell,
Miller, Deyell
In Chief

1 we would have no difficulty placing fifteen trainees in our
2 present Alberta Gas Trunk operations.

3 Q Mr. Deyell, you said earlier
4 that Alberta Gas Trunk presently had 25 NORTRAN training
5 positions. Is Alberta Gas Trunk prepared to expand this
6 number of NORTRAN training positions prior to receipt by
7 Foothills of the permits necessary to construct and operate
8 a pipeline ?

9 A No. One of the features of
10 this training program is that trainees, on being hired, are
11 offered permanent employment with Alberta Gas Trunk and are
12 accorded all the rights and benefits of the Company. Bearing
13 in mind that we must also offer employment to Albertans, it
14 would be difficult or impossible for us to increase the
15 number of NORTRAN training positions without the knowledge
16 that they would have permanent employment opportunities with
17 the Foothills' pipeline system.

18 Q You mentioned earlier that Al-
19 berta Gas Trunk has pursued a policy of local hire and your
20 operating experience has proven that residents of the areas
21 in which your pipeline operates provide the most stable work
22 force. Are you here referring to Alberta Gas Trunk's exper-
23 ience with the employment of Alberta natives?

24 A Yes. Our experieince with
25 Alberta native employees is part of it, although local hire
26 extends to all residents in the areas of our pipelines. A

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell
In Chief

1 large majority of our operators and several technicians
2 working from some 40 towns and villages within Alberta are
3 indigenous to the area. They have obtained positions with
4 us as our pipelines expanded into their areas and in most
5 cases have advanced their skills and developed new trades.

6 In the area of employing Alberta na-
7 tive people, I believe we have a very good program underway
8 which is co-ordinated by Elizabeth Scout. Liz is a native
9 person with an extensive background in native recruiting
10 and development and occupies the position of Manpower Deve-
11 lopment Analyst. Her principal functions are to inter-
12 view potential native employees; to provide information
13 on up-coming employment opportunities to employment conscious
14 native organizations in Alberta; to follow up counselling
15 with native employees, and to maintain contacts with var-
16 ious native and governmental agencies regarding native
17 employment.

18 Applications of potential employees
19 are circulated to all departments as job openings become
20 available. Successful applicants are then extended any
21 assistance that is required regarding relocation, accommo-
22 dation, et cetera. Liz works closely with the employees
23 and their supervisors during initial orientation and remains
24 available as a counsellor.

25 The program is being extended this
26 year to include job opportunities for summer employment.

Littledale, Saker, Ellwood, Burrell, .
Miller, Deyell
In Chief

1 Through the placement offices of universities and technical
2 schools, we are recruiting potential future employees and
3 offering them summer employment to provide practical on-the-
4 job work experience.

5 Currently we employ 19 native persons
6 in permanent positions within various departments, including
7 Field Operations, Drafting, Gas Measurement, Office Services
8 and Human Resources. Opportunities for development are
9 extended to them through in-house and on-the-job training,
10 apprenticeship programs, night school programs and corres-
11 pondence courses.

12 By the end of 1977, our objective is
13 to have at least 50 employees on staff who have been recruited
14 through the program.

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Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
In Chief.

1 O Mr. Deyell, Alberta Gas
2 Trunk has experience with a community relation program. Could
3 you describe the program for us?

4 A Yes, in 1972 Alberta
5 Gas Trunk recognized the need to develop closer relation-
6 ships between farm and community groups throughout the
7 province and the company's operating personnel. In response
8 to this need we initiated a community relations program for
9 the exchange of information on construction and operations in
10 order to create a good working relationship within the region.
11 Since this program was started, meetings have been held at
12 over seventy communities located near Alberta Gas Trunk's
13 rights-of-way or in areas impacted by its construction or
14 operations. These have been attended by both farm and town
15 residents in the area.

16 Alberta Gas Trunk is represented
17 at these meetings by various engineering and district oper-
18 ating personnel such as the district superintendent, the
19 general foreman, the landman and construction engineers, and
20 on occasion, by head office staff such as the land manager and
21 the operations superintendent. As the meetings the company's
22 plans for construction activities in the area are presented
23 and its operations in the area are described. Residents are
24 encouraged to discuss and offer their suggestions or express
25 their concerns. Often minor problems with rights-of-way are
26 brought to our attention so they can be corrected. These

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
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1 meetings also allow Alberta Gas Trunk personnel working in
2 the area to become familiar with the communities.

3 Q Please summarize Alberta
4 Gas Trunk's experience with small business development in the
5 areas where your pipeline operates.

6 A Alberta Gas Trunk has for
7 some time helped to stimulate business growth within the
8 communities in which we operate. We have helped several
9 companies to get started in some small entrepreneurial ways
10 by advancing prepayment for work. This has enabled these
11 firms to obtain their equipment as they require it. In
12 addition and to a limited extent, we have placed one or two
13 of our own people into organizations to help them get
14 started. For example, the first two such projects were cost-
15 plus and then we phased them out when it looked as if they
16 were able to stand alone.

17 More recently, with one particular
18 organization, we have entered into a three-year contract
19 which guarantees them a minimum amount of work each year. .

20 Now with respect to the business of
21 purchasing services and materials outside of the major centers
22 within Alberta, the policy of Alberta Gas Trunk is, that
23 wherever there is a service available in an outlying town,
24 whether it be a contracting service or whether it be a supply
25 house, these people are given an opportunity to bid. Experienc-
26 ce has shown that small contractors and suppliers working from

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
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1 outlying places can normally outbid their counterparts in
2 larger cities.

3 With such purchases as trucks, tires
4 and repairs for example, Alberta Gas Trunk deliberately goes
5 to the local businessmen to bid so long as a competitive
6 environment is maintained. In this way firms in the smaller
7 centers are able to compete.

8 Q Concerns have been raised
9 about the impact and lasting effect on communities of pipe-
10 line construction. Can you comment on this?

11 A Certainly. Within
12 Alberta our experience since 1957 has shown that both short
13 and long-term^{disruptive} effects on the smaller communities is minimal
14 and, as I pointed out in my previous response, of some benefit
15 in promoting local trade. I have also indicated how Alberta
16 Gas Trunk uses community meetings to keep residents aware of
17 our plans and thereby mitigate abnormal construction and
18 operating conditions.

19 In areas where local enterprise is
20 not sufficiently developed nor do the residents want more
21 development, the impact of construction and operations can
22 purposely be minimized by using camps during construction and
23 other centers as area offices during operations. There is a
24 fairly large degree of flexibility in this matter and we get
25 the community's feelings about it.
26

Littledale, Saker, Ellwood, Burrell,
Miller, Deyell.
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1 Q Thank you Mr. Deyell. Mr.
2 Saker, if I could turn to you. Does the sheet attached to
3 your evidence set your previous construction experience and
4 qualifications?

5 A Yes it does.

6 Q And, if I could just run
7 through that sir, I understand that you have 33^{years}/_{experience} in
8 construction management, engineering, supervision and estima-
9 ting, starting in 1943 to 56 with the Albert Highways Depart-
10 ment, Resident Engineer responsible for location, design and
11 construction of numerous grading and asphalt surfacing pro-
12 jects. Following that, for 8 years were with the Mannix
13 Company as Assistant Highway Division Engineer, Project
14 Superintendent, Assistant General Contracts Division Manager
15 and Highway Division Manager. And there you were involved
16 in preparation of contract tenders and the supervision of
17 construction projects, such as the Watson Lake-Ross River
18 Highway, portions of the Alaska Highway rebuilding program,
19 the Hay River and Pine Point Railway and numerous highway
20 and dam projects in Western Canada and the Western United
21 States. That you also took part in street and utility ins-
22 tallations at the Edmonton-Griesbach Army Base, Manitoba
23 Hydro's Grand Rapid Dykes, the Pine Point Railway and
24 various highway projects in Alberta and British Columbia.
25 Following that, you were Project Manager for four years with
26 McNamara Corporation to construct final section of the South

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Littledale, Saker, Ellwood, Burrell,
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1 Saskatchewan River Dam placing over 40,000,000 cubic yards
2 of selected earth-fill and 1,000,000 cubic yards of rip-
3 rap protection. That you were the Manager of Earth-Moving
4 Division for over four years for W.C. Wells of Saskatoon
5 undertaking the construction of several Saskatchewan Highway
6 projects and work in northern Manitoba.

1 That from 1970 to 1973, you were the
2 Construction Manager for Marine Pipeline, a division of
3 James Richardson & Sons, which is part of a group responsible
4 for the preparation of tenders, cost control and on-site
5 management staff and that you worked on construction of
6 Pointed Mountain Pipeline and Westcoast Transmission's
7 looping program.

8 That from 1974 to 1976, you were
9 General Manager of Patricia Contractors, another division of
10 James Richardson & Sons and undertook several highway
11 construction contracts in Manitoba, overburden removal at
12 Cassiar, B.C. and the construction of an effluent pond for
13 Reed Paper in Dryden, Ontario, and that you are presently
14 Construction Co-ordinator for Foothills Pipe Lines Ltd.

15 A It is true.

16 Q And that your membership in
17 Societies is as follows you obtained an Advanced Management
18 Diploma from the Banff School of Advanced Management, in 1958;
19 that you're the Past Director of the Manitoba Roadbuilders,
20 1975 and 1976; a past member of the Saskatchewan Roadbuilders,
21 1968 to 1971; a past member of the Canadian Construction As-
22 sociation, 1974 to 1976; and a past member of the Canadian
23 Pipeline Contractors Association, 1973.

24 A That is correct.

25 Q Mr. Saker, in your opinion,
26 will this project be under union jurisdiction?

While there may be individual exceptions, most of the major pipeline contractors that are capable of constructing what is referred to as "big inch" pipeline projects, carry ou the work in accordance with the four trade union collective agreements.

The collective bargaining process that has been established in the Canadian pipeline construction industry is that the Pipeline Contractor's Association of Canada, acting as the agent for its member contractors, on their behalf from time to time negotiates agreements with the trade unions. The members of the Association have agreed to be bound by these agreements, even though individually they may not be signatory to them.

The present union agreements cover, and the unions claim, jurisdiction over work that is proposed for the Yukon Territory. As these agreements are legally binding, the four trade unions in fact do have jurisdiction on the project proposed by Foothills, if the work is performed by "union" contractors.

Inasmuch as Foothills must ensure that

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1 that the contractors it will engage for the construction of
2 the project are capable in both resources and financially
3 capability to ensure completion of the project, and also will
4 be required to demonstrate previous experience of construc-
5 ting large diameter pipelines, we cannot visualize a contrac-
6 tor attempting to operate non-union on the mainline portion
7 of our project.

8 Further, in order to preclude the pos-
9 sibility of a strike on the project during the construction
10 period, Foothills would request the Association to nego-
11 tiate a Project Agreement with the Unions, that would ensure,
12 as far as possible, labour peace on the project during the
13 life of the construction.

14 As the negotiating process to develop
15 such agreements is a complex and specialized function, and
16 has evolved over the years, it should be conducted by the
17 Pipeline Contractor's Association, which has a competence
18 in this negotiating process, and which can maintain prac-
19 tices that have been developed, or is in the best position
20 to develop and incorporate new practices if they are required,
21 such as the incorporation of the northern natives into the
22 work force.

23 Q What are the current procedures
24 for hiring on pipeline projects?

25 A While each contractor may vary
26 the way in which he implements the procedure, each of the

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1 agreements has a section that describes the "Hiring Pro-
2 cedure" that will be followed for the members of that union.

3 It should be pointed out that these
4 agreements cover only the mainline pipeline construction.

5 The construction of the compressor sta-
6 tions is covered by union agreements with the appropriate
7 Building Trades' Council.

8 The same agreements previously referred
9 to also contain a section on "Working Rules", which must be
10 adhered to by the contractor.

11 Q How do you foresee the imple-
12 mentation of the agreement to your project, and the incorpor-
13 ation of the northern natives into the workforce?
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1 A There is no simple answer
2 to this situation. As the project will be under union
3 jurisdiction, then provision must be made in the project
4 agreement to provide a mechanism for the provision of
5 opportunity on an equal basis without discrimination for those
6 people that want to participate in the project on the one
7 hand and balance this with the need to have sufficient
8 personnel available with appropriate skill levels to get the
9 job done.

10 The mechanism by which to achieve
11 this result must be established jointly by all parties that
12 will be involved, through negotiation, and cannot be established
13 unilaterally. In our opinion, the matter should be referred
14 to the Joint Canadian Pipeline Advisory Council of the
15 Pipeline Contractor's Association and the unions with a
16 request that they meet with the appropriate representatives
17 of the northern residents and come to an agreement to ensure
18 the incorporation of the northerners.

19 If some such procedure is not
20 instigated, and conditions are set down unilaterally, the
21 potential might exist for labour problems when any attempt
22 to implement these procedures is made at the commencement
23 of construction.

24 The other factor involved, of course,
25 is the aspect of having qualified personnel available where
26 a degree of skill is required from the standpoint of

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1 acceptable projectivity and safety. To this extent, training
2 programs can be established in order to provide some of the
3 basic training for those who wish to participate but have
4 had little or no previous experience. This could possibly
5 be accomplished in conjunction with the screening procedure
6 discussed by others on this panel.

7 Q What areas of influence
8 will Foothills have on ensuring that northerners and
9 particularly natives, get jobs?

10 A We feel that the area of
11 influence whereby Foothills can be most effective is to
12 attempt to instigate the negotiation of a Project Agreement
13 between the various parties as indicated previously with
14 the request that provision for the northern natives be
15 incorporated and "built-in" to the Project Agreement or
16 Agreements. Foothills would be prepared to participate in
17 any such negotiations as an interested party to express our
18 views as to the adequacy of any such provisions that may be
19 evolved. We must recognize that the historic negotiating
20 process must be maintained in order to maintain the
21 continuity of good labour relations in the industry.

22 Q Now, what are your views
23 on training or upgrading programs, either in existence
24 now, or new programs to help northerners advance to higher
25 skilled jobs?

26 A The present training

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1 programs that have been developed jointly by the contractor's
2 association and the unions in conjunction with Canada Manpower
3 have been adequate to help the industry keep up with labour
4 requirements. The present programs have been based on the
5 concept that individuals that have had some exposure to the
6 industry are provided with the opportunity to upgrade their
7 basic skills. For example, programs have been established
8 which have provided to unskilled people some understanding of
9 pipeline construction practices so that they could then
10 proceed with further upgrading through on-job training. For
11 the individuals that are interested in progressing, on-the-job
12 training is the most effective means of upgrading skills.

13 There are, however, opportunities in
14 a construction project that require little or no previous
15 experience and that training is actually acquired on the job.
16 This training is usually obtained by association as a helper
17 or a skilled tradesman. To a large degree, it is anticipated
18 that for the significant portion of the northerners, this
19 course may prove the most practical.

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1 MR. HOLLINGWORTH: Thank you, Mr.
2 Saker.

3 Mr. Chairman and members of the
4 panel, or of the Board, that completes the evidence of this
5 panel and they are available for cross-examination at this
6 time. A couple of comments to make first. This morning
7 I neglected to mention that seated beside me on my right is
8 Mr. Mackie, who as I mentioned yesterday, will be here from
9 time to time to assist in legal duties.

10 The second thing is that Mr. Deyell
11 is unfortunately required to be in Calgary this evening and
12 cannot be here for this afternoon's session or indeed
13 tomorrow.

14 If there are participants, or members
15 of the public who wish to cross-examine Mr. Deyell, perhaps
16 we could start now, depending on your wishes, sir, with the
17 free period we have left and certainly arrangements can be
18 made for Mr. Deyell to return should that be necessary.

19 MR. CHAIRMAN: Mr. Goudge, I'll let
20 you speak to the arrangement.

21 MR. GOUDGE: By all means, sir, I
22 was just wondering when Mr. Deyell has to leave?

23 MR. HOLLINGWORTH: Immediately at
24 the end of the morning session.

25 MR. GOUDGE: At the end of the
26 morning session, well perhaps sir, if we could proceed on the

1 basis that counsel could be canvassed, we could simply go
2 down the list and if there are questions for Mr. Deyell,
3 specifically, they could be asked now. If it appears after
4 he leaves that there are questions which are appropriately
5 to be addressed to him, Mr. Hollingworth has offered to have
6 Mr. Deyell return, at another date for that purposes.

7 I think that canvass might take us
8 to the lunch break.

9 MR. CHAIRMAN: All right. I assume
10 that will be acceptable to all concerned, and could I ask
11 you then, Mr. Goudge, to go down the list and --

12 MR. GOUDGE: I must say, sir, I haven't
13 had a chance to canvas counsel, but just let me just see if
14 we can go down the list and see if there are any questions
15 that can be addressed specifically to Mr. Deyell, starting
16 with Mr. Joe?

17 MR. JOE: I have no questions.

18 MR. GOUDGE: Mr. Morrison, I think,
19 has gone. Mr. Ellis, I think, is probably not here. The
20 Yukon Association of Municipalities and the City of Whitehorse
21 are not here either. The same is true of the Chamber of
22 Mines. Association of Social Workers, Miss McPherson, by
23 all means.

24 This is Miss McPherson, Mr. Chairman,
25 members of the Board. Her organization is the Yukon Association
26 of Social Workers, which was added to the list yesterday.

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CROSS EXAMINATION BY MISS MCPHERSON:

1 MISS MCPHERSON: Thanks. Mr. Deyell,
2 I'm referring to page 9, the question that concerns have been
3 raised about the impact and the lasting effect on communities
4 of pipeline construction.

5 I'd just like to clarify a few things
6 there. Could you tell me how you measure effects on the
7 smaller communities?

8 You have stated that within Alberta
9 our experience in '57 has shown that both short and long
10 term effects on smaller communities is minimal.

11 MR. DEYELL: We don't have any
12 formal method of measuring it. We test the public reaction
13 by having these meetings, which would have been referred to
14 in the evidence.

15 Q I gather then,
16 that you are assuming that since you feel there have been
17 minimal effects on Alberta's small towns, that there will
18 be a minimal effect on Yukon small communities?

19 A Yes, that's correct.

20 Q In order then, to make this
21 comparison, you must feel that the general social and
22 economic structure of Alberta towns are similar to that
23 of the Yukon communities. Is that right?

24 A No doubt, there are a number
25 that would be similar, but I think in general, it wouldn't
26 be fair to say that, because I think that we all know that the

1 bulk of the communities in southern Alberta, for instance,
2 and central Alberta, would be certainly not of a native ethnic
3 origination, and so you wouldn't be really right to say that
4 they were that comparable.

5 In the northern part of the Province
6 of course, the communities would be very similar.

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1 Q It would seem to me then, that
2 if there are those differences that perhaps your assumption
3 of the minimal effects on small towns and Yukon communities
4 would not hold true as a general statement. Would this be
5 accurate?

6 A Well, what I referred to here
7 is that in the last several years, we have built two or three
8 pipelines of considerable length into the frontier areas of
9 Alberta and they have been relatively close to small communi-
10 ties, which would be somewhat similar to the communities in
11 the Yukon. We have no knowledge of any adverse effect on
12 those communities and so that's what I would be basing that
13 statement upon.

14 Q Yes, thank you.

15 MR. GOUDGE: Next, Mr. Chairman and
16 Members of the Board, for the Yukon Conservation Society,
17 Mr. MacKenzie is here for that organization.

18 Mr. MacKenzie.

19 MP. MCKENZIE: We would like to be
20 able to cross examine Mr. Deyell, but we will not have
21 Counsel to undertake it until Monday.

22 MR. GOUDGE: Well, perhaps then if
23 you have questions to be directed to him, you can, Mr. Hol-
24 lingworth can be asked to make good on his undertaking.

25 Skip one on my list, the next is the
26 Alaska Highway Pipeline Panel, represented by Mr. Templeton.

1 Mr. Templeton, do you have any ques-
2 tions of Mr. Deyell.

3 MR. TEMPLETON: Yes, I have, Mr.
4 Goudge. It's a policy question, Mr. Deyell, and I think
5 you're the senior member and I understand that ---

6 MR. DEYELL: Mr. Templeton, if I may,
7 before you start the policy question, I can give you an ans-
8 wer to a, only insofar as I'm a Director and an Officer of
9 Alberta Gas Trunk Line. I would have to defer that to Mr.
10 Burrell, because he is the, I believe the only Officer here
11 of Foothills, so I cannot really speak to Foothills' policy,
12 but if there's something that I can answer for you that does-
13 n't have to state Foothills' policy, I'll do my best to
14 answer it.

15 Q This has to do with Foothills'
16 policy.

17 A I think that Mr. Burrell will
18 have to answer that for you, rather than myself.

19 Q Then I do not have any questions
20 for you.

21 MR. GOUDGE: Then, sir, the Govern-
22 ment of Yukon, Mr. Horton.
23 CROSS EXAMINATION BY MR. HORTON:

24 MR. HORTON: Mr. Chairman, I have a
25 couple of questions that I was going to be asking this wit-
26 ness, but I think likely that they are questions that other
members of the panel would be able to deal with anyway, so

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1 with the exception of one.

2 Sir, I am looking at Page, right now
3 I am looking at Page 6, of your written and verbal evidence.
4 Maybe through my own carelessness or not having read it
5 thoroughly enough, I find myself in need of clarification.
6 What I am particularly interested in is the question of the
7 number of additional training positions outside of the NORTRAN
8 training program that would be available.

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2 There is reference to there being
3 only a limited number of positions available through Nortran
4 and yet there seems to be representations elsewhere both in
5 your evidence and other evidence of other members of the
6 panel, that there might be additional training opportunities
7 available through Foothills. Now, if you wish to defer that
8 question to the Foothills to other members of the panel more
9 directly involved with Foothills, fine.

10 A No, I'll take that one.
11 I think, maybe, there is a need of a little clarification here.
12 Anyway, it is certainly the intention, as I understand it, of
13 both the competing parties for a permit to build a pipeline
14 to the North, that whoever gets the permit will carry on
15 Nortran and will utilize these facilities as their organiza-
16 tion to perform training that is required for the project, and
17 that it certainly would be Foothills' position, if I may say
18 it this way, to take the Nortran organization and adopt as its
19 own, and carry on with it and use that structure to do what-
20 ever they have to do in the training area.

21 Q I see. Then the answer you
22 state, first paragraph, page 6, is not then to be interpreted
23 as sort of restricting the generality of the more general
24 answer that starts at the bottom of page 4 and goes on for
25 almost an entire page, listing the potential ability to
26 train.

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1 A That's quite right. Those
2 positions are available and we would use the Nortran group
3 to fill those positions. That would be the mechanism that
4 would be used.

5 Q I see. But the Nortran
6 program itself, that limitation is not going to be restricted
7

8 A No, No. There is no
9 limitation on that.

10 MR. HORTON: I have no further
11 questions of this witness.

12 MR. GOUDGE: Canadian Arctic Gas,
13 Mr. Taves.

14 MR. TAVES: No questions, thank you.

15 MR. GOUDGE: I still have one or
16 two questions. First I should ask, sir, if there are any
17 members of the public who would like to ask any questions
18 of Mr. Deyell.

19 CROSS EXAMINATION BY MR. GOUDGE .

20 Q Then, if I might, just one
21 or two questions for you Mr. Deyell. I may have some more
22 later when I have a chance to think of a few more. But right
23 now, you say on page 2, that there 15 training positions
24 introduced into your system last summer on construction
25 of the pipeline compressor station. Is that correct?

26 A Yes that's correct.

Littledale, Saker, Ellwood, Burrell,
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1
2 Q Is that the first time
3 that construction training positions have been put into a
4 northern training program?

5 A No, I believe we had some
6 the year before, but perhaps you might ask that of the
7 Nortran group when they come on. They may correct me on it.
8 But I believe the year before that we had, I don't think
9 there is any before that though.

10 Q Is this a major shift in
11 policy of the Nortran program to move into the area of training
12 for construction purposes?

13 A Well, we've always wanted
14 to do it. But we concentrated the effort initially on the
15 operational people, and course, as time went on, it was felt
16 that the only way we could enlarge the program was to seek
17 some of this in the construction area. It's not an easy
18 thing to do. You have to work with contractors, you have
19 union situations to iron out, in case if there are some
20 difficulties that they've got, and really, about two years
21 ago was about the fastest we could get to that aspect of it.

22 Q Yes. Your two years'
23 experience indicates that that kind of direction is a feasible
24 one for Nortran to move in?

25

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Littledale, Saker, Ellwood, Burrell,
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1 A Yes, I see no problems with it.
2 We are, as mentioned in this direct evidence, we are intend-
3 ing to do it again this year.

4 Q In the entrance requirements
5 for the program, you refer to that on Page 5, Mr. Deyell,
6 when you say it may be necessary for new candidates to up-
7 grade before entering the program. I take it there is no
8 difficulty in contemplating a scheme, NORTRAN being altered
9 to provide for relaxed entrance requirements in connection
10 with ^{certain} skills, or indeed, in connection with applicants from
11 certain areas.

12 A Well, I know that the NORTRAN
13 people have had discussions with the Governments that have
14 been in the apprenticeship programs with respect to whether
15 they could alter the requirements and I don't think they've
16 really had very much success in that. Now, there was depar-
17 tures from the procedures during World War II and we wonder
18 just a little why they have to be so adamant in their regu-
19 lations now. So, personally, I don't see any reason why
20 the pressure can't be brought to bear to change those require-
21 ments.

22 Q To relax them in individual
23 cases or --?

24 A We would hope that we can pres-
25 sure the government people into doing that. We have not been
26 successful, as I understand it, in doing it so far.

1 Q You would think it desireable
2 to move in that direction?

3 A Well, there are basic academic
4 skills that people have to have that are basic to the, to
5 whatever the trade is that you're going into. I don't
6 think you could lower the standards in those basic ones that
7 are required.

8 I think maybe the area that we'd work,
9 Mr. Goudge, primarily, is the length of time it takes to
10 complete an apprenticeship program. Now there's, I'm not
11 sure of the dates, but they're in the order of three to four
12 years for some of the programs and we would look towards
13 shortening that part of it, not so much as shortening the actual
14 academic skills that are required.

15 Q Or, indeed, reducing some of
16 the academic prerequisites?

17 A Well, I think that would be
18 somewhat difficult when you're talking in terms of electric-
19 ians, for instance, that it seems to me that there is a mini-
20 mum that has to be required and you really couldn't drop
21 below that or you wouldn't have a qualified electrician.

22 Q And you're at the minimum now?

23 A Well, I rather think they are,
24 you know, maybe in the close examination you might be able
25 to strip some of it away, but I doubt it.

26 Q Now, in connection with your

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1 answer to the question at the bottom of Page 5, you say that
2 Alberta Gas Trunk is not prepared to expand the number of
3 NORTRAN training positions prior to receive the permits
4 necessary to construct and operate. Do you mean by that,
5 all the permits that will ever be necessary, I take it you
6 don't.

7 A No, not by any means.

8 Q You mean the decision in prin-
9 ciple to be taken that we're told by the Government of Cana-
10 da at the end of the summer?

11 A Yes, that's correct.

12 Q And you would anticipate then
13 right at the end of this summer, being in a position to
14 expand your training positions in Alberta Gas Trunk, as
15 you've indicated in your evidence?

16 A Yes, that's correct.

17 Q And the total number of posi-
18 tions to which you would be able to expand, I take it, is the
19 total that appears throughout your testimony as you move
20 from category to category?

21 A Yes, in fact, these numbers
22 are somewhat old. They were perhaps six months, put together
23 six months ago. We've expanded our operational staff since
24 then and I would think that we could increase the numbers
25 rather than decrease them.

26

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1 Q Those trainees or those
2 trainee positions would as far as AGTL is concerned all be
3 filled by Yukoners?

4 A Yes, that is on the assumption
5 of course, that the Yukon route was the only pipeline route
6 that did receive a permit. Or, if there was anything else,
7 of course, we have expanded into whatever frontier areas --

8 Q In the Dempster lateral you would have
9 to take in N.W.T. trainees?

10 A Yes, if that's where a
11 pipeline was being built, then of course it would be people
12 from the N.W.T.

13 Q Yes. Now, supposing it
14 simply was the route that Foothills has applied for. Have
15 you given any thought to the component that would likely
16 arise to the ethnic component of the trainee group that would
17 likely arise in your expanded training program with AGTL,
18 how many would be native, how many would be non-native?

19 A Well, it certainly would be
20 our objective to go all the way with natives if we could,
21 and I think being realistic about it, that the supervisory
22 staff, for instances, I would just doubt if they would be
23 ready to take over those positions. In time, of course this
24 will happen.

25 We have a few in our own group that
26 are reaching a stage where they can get into the area of

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1 supervision. We have not too many in there yet, I think I
2 mentioned in here that one of them has moved on up to a
3 counsellor level, but certainly for all of the -- we believe
4 that we can develop all of the tradesmen that are required,
5 I can't think of any trades positions that we couldn't fill,
6 we should be able, of course, to take care of all the
7 administrative. I would think that when you get into the
8 area of pipeline patrol by aircraft that you'll find, although
9 we're not training them, I'm sure that we can find native
10 people who have the flying skills to fill those positions,
11 and so, apart from the supervisory positions, I think that
12 we could go into operations largely with natives.

13 Q Your anticipation then,
14 would be that the bulk of those positions would be filled by
15 natives. The bulk of those training positions?

16 A Yes, that would be our
17 objective.

18 Q My last question, Mr. Deyell.
19 As this training program goes on,
20 it will be contemporaneous with the construction program, will
21 it not?

22 A Yes.

23 Q Do you envisage any difficulty
24 in attracting into your training program for the operations
25 jobs and retaining people in your program, given the pressures
26 that will exist because of the ongoing of construction in the

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1 Yukon?

2 A Yes, I'm sure this is going
3 to be a problem that we'll face. And we'll face it in our
4 own construction and operations as well. There's a certain
5 element of people that take a look at the dollars that are
6 being paid to the construction people, and it is difficult to
7 hold them.

8 With the people we have trained so
9 far, we would anticipate in moving them on to construction
10 right away, as soon as construction starts. They would fill
11 the role of construction inspectors and for those that have
12 compressor station skills, they would fit into the construction
13 of compressor stations and work right with them while
14 the units were being installed.

15 We have no problem with those that
16 have gone through the training program, but I'm sure we're
17 going to have a problem attracting people into the training
18 program, once the construction starts.

19 Q How do you deal with that?

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1 A Well, I'm not so sure how
2 we'll deal with that. I'd like for you to pose that
3 question to Mr. Virtue of the Nortran Training Program. I'm
4 sure that he has thought about this a great deal more than
5 I have and will have some plans made for it.

6 Q Do you have to match wage
7 levels, for example, with the construction process?

8 A Well, that's going to create
9 some other problems. If we do that on our existing system
10 in Alberta, and we have northern natives training beside
11 Alberta natives, and you have one being paid a rate equal to
12 a construction rate in the north, we're in for trouble with
13 the other side of it.

14 I don't think that will work.

15 Q That's not the first of my
16 ideas that hasn't worked, Mr. Deyell. I take it, you'd agree
17 with me, though to conclude that unless that problem can be
18 beaten, the Nortran program is in serious jeopardy during
19 the construction phase, as far as training Yukoners is
20 concerned?

21 A It's going to be tough.
22 There's no question about it. We will all have to work towards
23 that, and I'm not sure what the answers are going to be, but
24 we're going to need a lot of co-operation from the native
25 groups, we would hope that we would be able to interest
26 enough people in the long range benefits to participate in

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1 it, but it's something that's going to be difficult to
2 guarantee.

3 Q Thank you. Those are all
4 the questions I have.

5 MR. LITTLEDALE: Mr. Goudge, could
6 I offer something to you here, that might be helpful.

7 The way, what you, we're talking
8 about here, with Mr. Deyell a little while ago is something
9 that exists now, in other areas where construction work is
10 going on, and people from Operations get involved in
11 construction work. You're talking, I gather, primarily
12 about the difference or inequity between, say, construction
13 wages and operating wages. Is that correct?

14 Q Well, I can see a number of
15 attractions on construction, Mr. Littledale, that would
16 entice potential trainees to stay in the Yukon, rather than
17 go and train with AGTL in the Nortran Program.

18 One of them is the wage rate.

19 A Right. When, now as far as
20 the person going away to be trained, that's one thing; but
21 if an operating person goes on to construction, it is a
22 common practice now in a good segment of the industry to
23 offer some additional compensation, by this, depending on the
24 hours, one team may get an additional 25 per cent or 40 per
25 cent over and above his salary for the duration of the time
26 that he is on construction, because of the hours worked and

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1 the time involved on the construction job.

2 Once the construction job is finished
3 and he reverts back to the operating job, then he goes back
4 to his standard salary. So that is one way that this is being
5 taken care of.

6 I don't know if that helps you or not.

7 MR. CHAIRMAN: Thank you, Mr.
8 Hollingworth. I understand Mr. Deyell can be available next
9 week for the benefit of counsel or others may have questions.
10 Are you able to tell us now when that might be?

11 MR. HOLLINGWORTH: Well, sir, I
12 presume that's a matter of indifference to my fellow counsel
13 when Mr. Deyell is brought back next week, and I would suggest
14 that we could arrange a time suitable to Mr. Deyell that
15 would be appropriate for Counsel.

16 MR. CHAIRMAN: Certainly, nothing
17 has been settled at the moment?

18 MR. HOLLINGWORTH: I am sure that
19 could be done, sir.. If you leave that with me, I'll attempt
20 to do that.

21 MR. DEYELL: I would just advise,
22 Mr. Chairman, that I perhaps have left the wrong impression
23 with respect to what a native is, and I hope I didn't leave
24 the impression that we were saying that all of the people
25 who will operate this pipeline will be natives, I suppose,
26 as some people think of them, as being, well the original

1 natives of the North. The Indians, Eskimos and so on. We, I
2 think of it anyway, and I'm talking of this personally as the
3 natives of the North is somebody who's been raised in the
4 North. As far as the color of their skin or their ethnic
5 background, to me, doesn't make any difference. Now, I think
6 perhaps it came out in the beginning that I might not have
7 been thinking of it quite that way.

8 MR. GOUDGE: I just want to ask one
9 question on that Mr. Deyell. I take it then that there will
10 be no preference given in Nortran training positions opened
11 up for the purpose of the Foothills project to Yukon Indians?

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Littledale, Saker, Ellwood, Burrell
Miller, Deyell
Cr Ex by Goudge.

1 A No, I wouldn't say that, if
2 you put it that way, because, as we have the program now, it
3 does, and so what I would really want to say here is that
4 there are a lot of people I'm sure that are living in the
5 North, that have lived here all their lives and they're not
6 the Indian and Eskimo ethnic origins and they'll have skills
7 that are applicable to this kind of work and there is a place
8 for them in the operation of the pipeline.

9 When we're developing new people,
10 though, and training them, we have given preference to the
11 Indian/Eskimo and the Metis. So there is a little difference
12 there.

13 Q And that preference would con-
14 tinue with the new training positions that you would be
15 opening up given Foothills approval?

16 A Yes, we, it is our feeling
17 that they are the people that need the assistance.

18 Q Thank you.

19 MR. CHAIRMAN: Thank you, Mr. Deyell,
20 we stand adjourned now until 2 o'clock.

21 MR. DEYELL (STOOD DOWN)

22

23

24 (PROCEEDINGS ADJOURNED)

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Littledale, Saker, Ellwood, Burrell,
Burrell, Miller
Cr Ex by Joe

1 PROCEEDINGS RESUMED PURSUANT TO ADJOURNEMENT

2 MR. CHAIRMAN: We will reconvene now,
3 please, ladies and gentlemen, and I will ask Mr. Hollingworth
4 to continue.

5 MR. HOLLINGWORTH: Sir, Mr. Mackie
6 will be handling today's, this afternoon's session.

7 MR. MACKIE: Mr. Chairman, before
8 the panel starts, I would like to correct a statement that
9 was made by Mr. Deyell. He indicated that Mr. Burrell was
10 the only Officer of Foothills Pipe Lines that was present.
11 Mr. Littledale is also an Officer of Foothills.

12 MR. GOUDGE: I take it, sir, in the
13 normal course now we could presume the cross-examination of
14 the whole panel, with the exception of Mr. Deyell who has
15 left and, with your leave, sir, I would go through the list
16 of participants and call upon them in order for a cross-exa-
17 mination of this panel and that would lead off with Mr. Joe,
18 for the Council for Yukon Indians.

19 Mr. Joe.

20 MR. JOE: Yes, we have a few questions
21 Mr. Chairman.

22 CROSS EXAMINATION BY MR. JOE:

23 MR. JOE:

24 Q And this one will be directed
25 to Mr. John Burrell. Now, Mr. Burrell, I believe you ap-
26 peared before the National Energy Board on March 9th and 10th,
is that correct?

Littledale, Saker, Ellwood, Burrell,
Miller,

Cr Ex by Joe

1 A Yes, it is.

2 Q I believe, in your appearance,
3 there was some admittance of previous testimony by Mr. Bob
4 Blair, is that correct? Concerning opposition in the North-
5 west Territories of approximately two to five per cent of the
6 population who would be opposed to a pipeline construction?

7 A Mr. Blair spoke to that in
8 December, and I had referenced his testimony during my appear-
9 ance.

10 Q And, my understanding of your
11 testimony before the National Energy Board at that point in
12 time was that, if, in fact, two to five per cent of the respon-
13 sible citizenship in the Northwest Territories was opposed
14 to construction of a pipeline, that, in fact, Foothills,
15 would not construct this pipeline, is that correct?

16 A You said in the Northwest Terri-
17 tories, did you?

18 Q In the Northwest Territories.

19 A Actually, I was speaking to
20 Mr. Blair's evidence at that time and, or referring to Mr.
21 Blair's evidence at that time and to what he had stated in
22 his evidence, yes.

23 Q Now, in cross-examination by
24 Mr. John Olthuis , you were specifically asked at Page 26725,
25 on March the 9th, you were asked this question in the cross
26 examination; "In the event that a settlement is imposed in

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 the Northwest Territories, a land claims settlement, which
2 does not meet the express wishes of the Dene, as read from
3 the evidence of the Indian Brotherhood of the Northwest
4 Territories, would Foothills proceed to build this pipeline
5 if it got the permit?

6 "Mr. Burrell, the answer to that is
7 that we said clearly that if there is more than two or five
8 per cent, then whether we have the permit or not, we would
9 not build it."

10 A Yes, that is my testimony, yes.
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Littledale, Saker, Ellwood, Burrell,
Miller,
Cr Ex by Joe

1 Q And on the day following,
2 March 10th, you were also asked by Mr. Page, I believe, in
3 cross-examination, and your -- Mr. Page's question was
4 primarily on page 27033. My own question here, to be clear
5 for the record is, In the event that a land claims settle-
6 ment is imposed on the Yukon which does not meet the wishes
7 of the Council of Yukon Indians, would Foothills proceed to
8 build a pipeline if it received the permit of public
9 convenience and necessity.

10 It is an identical question to
11 yesterday, only yesterday's was in terms of the N.W.T. and
12 your answer, Mr. Burrell: "I think that it falls definitely
13 into this 5 and 2 per cent arrangement Mr. Blair was
14 speaking to. We would take no different position in the
15 Northwest Territories or the N.W.T. or the Yukon. Our position
16 on that is the same. So if there was, I'm searching for the
17 words to use here, but certainly I think you refer to the
18 5 per cent, or thereabouts, then the answer would have to be --
19 and your answer was broken up at that point. Do you recall
20 giving that answer, Mr. Burrell?

21 A Yes, I made that statement
22 at the National Energy Board, but, as a matter of fact, in
23 discussions with Mr. Blair at that time, what I had done,
24 well, let me go back, what I had done at that time was taken
25 his statements in the N.W.T. and had transferred them over
26 to the Yukon and had made a reference to that.

Littledale, Saker, Ellwood, Burrell
Miller
Cr Ex by Joe.

1 The position was that I had mis-
2 interpreted his position on that, and that matter has been
3 cleared up, in evidence that Mr. Blair has presented to the
4 National Energy Board. I might add too, that as far as the
5 Company's position regarding the land claims issue, Mr. Blair
6 has been most active in that and has really taken that on as
7 one of his main undertakings.

8 The whole matter of the land claims
9 issue, and the position of the Company relative to that will
10 be dealt with by Mr. Blair when he appears as a policy
11 witness.

12 I think it would be most appropriate
13 if questions that were related to that could be delayed until
14 his appearance, because he is the chief policy witness for
15 the Company.

16 Q I see, so is it now my
17 understanding that the position, or your interpretation on
18 that day on March 10th and the 9th, has in fact been changed
19 or corrected.

20 A As I stated, has been, what
21 I stated before the National Energy Board, my interpretation
22 of what I would, or the transfer of the position the N.W.T.
23 has been clarified by Mr. Blair in evidence before the
24 National Energy Board, and that evidence is public now, and
25 a reference to that would clearly give the position of the
26 Company with respect to land claims not only now, but

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe.

1 certainly as it was, and intended to be, by Mr. Blair.

2 The position, of course, was that

3 I incorrectly transferred his position or the Company's
4 position from what was said in the N.W.T. to the Yukon.

5 There's no change in position, it's
6 just that I incorrectly transfered the position taken in the
7 N.W.T. to the Yukon.

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Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 Q So, would it be correct to say
2 that the position that Foothills took in the Northwest Terri-
3 tories is not applicable in the Yukon?

4 A I think in general, Mr. Blair,
5 well, Mr. Blair said that the principles still apply and I
6 think that a reference to his statement in the, as presented
7 to the National Energy Board would clearly set out the posi-
8 tion of the Company with regard to this topic and, also, he
9 will be addressing this matter when he appears as a policy
10 witness before this Inquiry.

11 Q Thank you.

12 Now, I have some questions concerning
13 the economic impact of the proposed pipeline to be constructed
14 in the Yukon.

15 A Yes.

16 Q And, I, my understanding is
17 that there have been certain socio-economic studies carried
18 last Fall, is that correct?

19 A That we have undertaken studies,
20 yes, that is correct.

21 Q And, in undertaking these stud-
22 ies, you would have to, in fact, travel to the Yukon communi-
23 ties? Is that correct?

24 A Information was, in our study,
25 the information concerning communities was built in. I think
26 if you would want to get into detail on that it would be

Littledale, Saker, Ellwood, Burrell, .
Miller
Cr Ex by Joe

1 probably preferable if Mr. Ellwood spoke to those.

2 Q Mr. Ellwood, perhaps you could
3 address the question. Did, in fact, Foothills to to the
4 various communities in the Yukon to obtain the necessary data
5 for their socio-economic study?

6 MR. ELLWOOD: No, we relied very heavi-
7 ly on the information which is available, public information
8 that is available on the communities here. We also relied
9 on the knowledge of our consultants who were resident in the
10 Yukon, but they did not go to the field, if you wish, to all
11 the communities prior to writing the impact statement.

12 Q I see, so then it would be
13 clear that, did you in fact visit any Yukon communities at
14 all? For the collection of data for your socio-economic
15 study?

16 A I would just have to check on
17 the timing of the matter. We did not go to the communities
18 to search for information or did not make any special trips
19 for that purpose, but certainly, there were discussions going
20 on with people in communities and their local knowledge, being
21 residents here, but I would have to check to see what the timing
22 of all those matters were and how they fit in with the writ-
23 ing of the statement.

24 Q I see, and in the collection
25 of data, whether it was in the communities or whether it was
26 centralized here in Whitehorse, did you or your researchers

Littledale, Saker, Ellwood, Burrell, .
Miller

Cr Ex by Joe

1 for Foothills notice any native economy which was based on
2 seasonal harvesting of renewable resources?

3 A Yes, I think you'll find
4 reference to that in the document that....

5 Q Your studies, I have also no-
6 ticed an economy which is based on non-renewable resources,
7 is that correct?

8 A Yes.

9 Q And I, have you, would you
10 agree with the statement that the growth of industries, based
11 on non-renewable resources, has created an imbalance in the
12 northern economy?

13 A An imbalance?

14 Q An imbalance, that's correct.

15 A No, I don't think I could agree
16 with that statement.

17 Q Do you have any reason for not
18 agreeing?

19 A The growth of the economy here
20 in Yukon would, I would look upon it more as a diversification
21 of the economy, rather than an imbalance. What has happened
22 over the last fifty or a hundred years has been a diversifi-
23 cation of the economy here from strictly a land based now to
24 also a wage or industrial economy.

25

26

Littledale, Saker, Ellwood, Burrell,
Miller.
Cr Ex By Mr. Joe.

1 Q Would you agree with the
2 statement that large scale projects based on non-renewable
3 resources have rarely provided permanent employment for any
4 significant number of native people?

5 A Yes, I would agree with
6 that.

7 Q Would you also agree that
8 regardless of any terms and conditions that could be imposed
9 on any pipeline, that native people would not derive any
10 lasting benefits from the pipeline?

11 A No I couldn't agree with
12 that.

13 Q Do you have any reason
14 for your disagreement?

15 A Well, I would consider
16 long term employment with the project to be a lasting benefit.
17 I would consider the supply of gas to communities here to be
18 a lasting benefit.

19 Q Then, in fact, your
20 suppositions are based on the fact that native people will
21 be getting long term employment on the pipeline. Is that
22 correct?

23 A Yes, I'm sure they will be.

24 Q Well, let's pursue that a
25 little further. What type of jobs would provide the native
26 people long term employment on the pipeline?

Littledale, Saker, Ellwood, Burrell,
Miller.
Cr Ex by Mr. Joe.

1 A The jobs that are available
2 you can find them in page 2.E 2.1 of our application docu-
3 ments. In hitehorse, I'll just name a few of them here:
4 the managerial or supervisory positions, the manager of gas
5 transmission, field operations superintendent, engineering
6 superintendent, there are secretarial jobs, gas controllers,
7 charts censors, material controllers, accountants, drafting,
8 computer technicians, controls engineers, and others that
9 didn't mention there. In the other area offices, jobs such as
10 technical maintenance superintendent, controls technician,
11 mechanical technician, computer technician, measurement
12 technician, welder, auto mechanic, equipment operators,
13 right-of-way maintenance, those jobs are available on the
14 pipeline.

15 Q In fact, before native
16 people can take advantage of those many jobs, that there is
17 certain requisite training that is required prior to them
18 entering into those occupations. Is that not correct?

19 A Yes, many of those jobs
20 do require training and certain skills, some of them very
21 highly skilled.

22 Q Have your studies enabled
23 you to determine whether or not the native people presently
24 in the Yukon, whether they can in fact take advantage of these
25 many job opportunities, for these long term job opportunities?
26

Littledale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Mr. Joe.

1 A I don't think our studies
2 have done that, but our experience indicates to us that these
3 jobs are available and the native people could hold these
4 jobs, could do that. The Nortran program and our experience
5 in Alberta and B.C. has shown us to be so.

6 Q Would you agree with the
7 statement that the continued viability of the native economy
8 should be an objective of northern development, not its
9 price?

10 A I certainly would agree
11 that it's a worthwhile goal, something to be pursued.

12 Q This next question is a
13 policy question which you in all likelihood will pass on
14 to Mr. Bob Blair, but I will ask it anyway. In your prepared
15 evidence, you stated that one of the primary or the overall
16 objective is to maximize the net benefits and minimize any
17 detrimental effects of the pipeline, is that correct?

18 MR. BURRELL: Yes, that' correct.

19 Q Would you agree that in
20 order to, one to achieve this overall objective is by the
21 implementation and settlement of the Land Claims Settlement
22 in the Yukon?

23 A We believe that the Native
24 Land Claims issue is very important, and we have stated that
25 on many occasions. As I said before, to get into the position
26 of the company in depth with respect to this particular issue

Littleedale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Mr. Joe.

1 is best done in questioning with Mr. Blair who is, as I said
2 before, has taken it himself to be involved with this par-
3 ticular matter because he feels it's such an important under-
4 taking, and as I said, has concluded that this is best done
5 by the Chief Executive Officer of the Company.
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Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe.

1 Q Okay, thank you. I would
2 like to, Mr. Burrell, if I could, get into your evidence on
3 natural gas to communities in the Yukon.

4 A Yes.

5 Q Have you ever studied or
6 reflected on the type of fuel the majority of the Indian
7 people in the Yukon now use.

8 A You mean, wood?

9 Are you talking about -- we've looked
10 at comparing it with fuel oil and electricity. We did a look
11 at Burwash, but the fuel used there, of course, is wood and
12 it would be difficult for natural gas to compete with wood,
13 but on the other hand if the fuel was in fact oil, then it
14 could compete very favourably.

15 Q I see. From the evidence
16 that you do have, or the material that you do have from your
17 study, would it be fair to say that the majority of Indian
18 people in the Yukon burn wood?

19 MR. ELLWOOD: We don't have information
20 on what the majority of Indian people in the Yukon, what fuel
21 they're using for home heating. We did ask our consultant
22 to give us some advice on the communities of Burwash and
23 Upper Liard, since they are in proximity to the pipeline
24 route, and primarily native communities and the information
25 which he could find on that in the short order that we asked
26 him to provide it was, that there are perhaps only three or

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 four people in each of those communities who are burning oil
2 for home heating. The majority in those two communities I
3 would think were in wood, the rest of the Yukon, I don't have
4 any information.

5 Q Now, in your distribution of
6 natural gas to these communities, is it not correct to say
7 that before natural gas can be feasably distributed to
8 communities, that these communities have to have central
9 facilities and be fairly close together in terms of population
10 distribution?

11 MR. BURRELL: When you mean central
12 facilities, you mean, I'm not sure I understand what you mean
13 by central facilities?

14 Q Central community facilities,
15 such as residential areas --

16 A Oh, I see. Well the
17 economics of delivering natural gas or in this case, natural
18 gas to any location depends upon two things primarily, the
19 quantity of gas which is utilized, the distance the -- no
20 three things -- the distance the community is from the main
21 line, and the compactness of the community.

22 The more gas that a community would
23 use, the closer it is to the main line and the more compact
24 the distribution system is, the lower cost will the natural gas
25 and each community has to be looked at in it's own particular
26 situation. The types of loads are important too.

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 Q Well, my suggestion, Mr.
2 Burrell, is to you, is that the native people in the Yukon
3 Territory or the Yukon Indian people, in fact, will not derive
4 any benefits from the distribution of natural gas to their
5 communities primarily for the reason that natural gas per
6 se cannot compete with the cost of wood fuel, which they
7 presently burn.

8 A Well, certainly, you have
9 to admit, that we have to admit, that if natural gas is
10 competing with wood, then it just can't compete.

11 In other communities, though, that
12 where native people would be utilizing, as other people would
13 be utilizing, oil, then they could gain advantages from the
14 use of natural gas.

15 Q In your opinion would you --
16 given the fact that the native people having been exposed to
17 the non-Indian society for the last number of years have not
18 yet converted in the majority to the use of other fuels. Is
19 there any reason why Foothills now proposes to think that in
20 order for the Indian people to, in fact, take advantage of the
21 use of natural gas that there is good reason for them to
22 convert from wood to natural gas at this point in time?

23 A Well, there is a lot of
24 convenience involved with the use of natural gas. Many people
25 have converted to natural gas because of that reason. We
26 have said that, you people of the Yukon, whether they be native

Littledale, Baker, Willow, Purrell,
Miller
Cr Ex by Joe

1 or white people, the choice of utilizing natural gas is
2 theirs. What we are saying is that this project can make
3 natural gas available to the people of the Yukon, but it's
4 really their decision as to whether or not they would choose
5 to take it. Whether it be for economics or convenience or
6 whatever.

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1 Q Would Foothills be prepared to
2 assist the Indian people in the Yukon to cover the costs of
3 conversion from wood to natural gas, provided that it can
4 be easily distributed in those Indian communities?

5 A Yes, I know that in communities
6 now that the practice is to assist people in the conversion
7 to natural gas. We have said in our evidence, too, that we
8 are prepared, even if we are not the distribution company,
9 we stated the reasons as to why we felt that a municipality
10 or an organization, a local organization should do it, even if
11 we weren't, we were prepared to assist people to convert, to
12 consider the conversion to natural gas and that position
13 stands.

14 Q Now, on Page 10 of your pre-
15 pared evidence, question 19, which deals with provision of
16 opportunities for local businesses. Can you tell me, from
17 your studies, whether or not you can determine whether the
18 majority of the Indian people presently take advantage
19 of local business opportunities in the Yukon?

20 A Whether they do at present?

21 Q Yes.

22 MR. ELLWOOD: No, like the majority of white
23 people, most are employed rather than owners or operators of
24 a business.

25 Q Is Foothills acquainted with
26 the resources that are available to Indian people in the

1 Yukon, in which they can seek financial assistance in order
2 that they can in fact take advantage of the many business
3 opportunities that would be available from construction of
4 a pipeline?

5 MR. BURRELL: Perhaps Mr. Miller could answer
6 that.

7 MR. MILLER: If I got the question
8 correctly, Mr. Joe, you were referring to dollars available
9 or places where Indian people can acquire dollars to take
10 advantage of business opportunities?

11 Q That's correct.

12 A Well, in addition to all the
13 normal business lending institutions, they also have avail-
14 able to them the Indian Affairs program, Economic Development
15 Program.

16 Q Would there be any type of
17 requirement which would restrict the Indian people from ap-
18 plying to such things as the Indian Development, Economic
19 Program?

20 A As far as I'm aware, any
21 registered Indian in the Yukon can apply.

22 Q Are you acquainted with the
23 restriction that a native person, should he apply to the
24 Indian Development Economic Program, that he would require
25 to place twenty per cent of the equity that's required into
26 any specific project?

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 A Yes, but, I think that's
2 probably correct.

3 Q And, in fact, if a small busi-
4 ness opportunity, the cost of \$100,000.00, let's say for the
5 sake of discussion, is made available through Foothills,
6 that person would have to come up with \$20,000.00, based on
7 the restrictions of the Department of Indian Affairs. Do
8 you see that as an impediment in the way of the status Indian
9 applying for this type of assistance?

10 MR. BURRELL: I think if you referred to Mr.
11 Deyell's evidence, in which he has said that a Trunk Line on
12 a number of occasions has made it possible for small
13 contractors to get into business by giving them an advance-
14 ment, I think he calls it. I guess he calls it a pre-pay-
15 ment. A prepayment on the work to enable him to get into
16 business, in order to get the equipment and Trunk Line
17 is one of the sponsor companies of Foothills and certainly
18 the policy positions and the approach that Trunk Line and
19 Westcoast use for that matter, would also apply to Foothills.

20 As we said in our evidence that many
21 of our socio-economic policies and other policies are based
22 upon the experience of our two sponsoring companies.
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Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Joe

1 Q You would agree with me that
2 if in fact the native people have their own source of funding
3 to assist them to apply for contracts without going to a
4 third party, such as the Federal or the Territorial Governments,
5 that this would greatly assist them in applying and becoming
6 a part of the construction and the later O & M phases of the
7 Foothills pipeline?

8 A Well, I think that you'd have
9 to agree that that's right. Any time that you have the
10 working capital in order to advance a project, that it's
11 easier to do, yes.

12 MR. JOE: Those are all the questions
13 that I have at the present time, Mr. Chairman.

14 MR. CHAIRMAN: Thank you, Mr. Joe.

15 MR. GOUDGE: To follow the list, sir,
16 next I have Mr. Morrison for the Whitehorse Chamber of Commerce.

17 CROSS-EXAMINATION BY MR. MORRISON:

18 MR. MORRISON: Mr. Burrell, one
19 question of clarification on the distribution of gas.

20 MR. BURRELL: Yes.

21 Q You stated in your evidence,
22 "Edmonton border price, which is the price -- Alberta border
23 price, Alberta-Saskatchewan border price --

24 A Yes.

25 Q -- of gas, but not the same
26 price -- that's not the same price as gas delivered in

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Morrison
Cr Ex by McPherson

1 Alberta?

2 A No, because the Federal/
3 Provincial arrangement is that gas which is sold for
4 consumption in Canada outside of Alberta, is priced -- the
5 base price is the price at the Alberta-Saskatchewan border
6 and from there you add on the transportation costs.

7 For instance, the cost of gas in
8 Toronto becomes the Alberta border price, plus the transporta-
9 tion to Toronto, and that's the -- the Alberta border price
10 is the base price as I have said for gas consumed in Canada
11 out of Alberta.

12 Q Okay, that's fine, that
13 clarifies it.

14 MR. GOUDGE: Next, sir, on our
15 list is the Yukon Transportation Association, if Mr. Ellis
16 or any other representative is here.

17 Yukon Association of Municipalities
18 or the City of Whitehorse?

19 Yukon Chamber of Mines?

20 There is Ms McPherson for the
21 Yukon Association of Social Workers?

22 CROSS-EXAMINATION BY MS MCPHERSON:

23 MS MCPHERSON: Perhaps I could
24 address my first question to Mr. Ellwood?

25 On what basis have you formulated
26 your social impact policies? What research -- could you give

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by McPherson

1 us a run down of those?

2 MR. ELLWOOD: Well, a number of these
3 policies have been developed as a result of work that we have
4 been doing over the years in the Northwest Territories, as
5 well as the more recent work that we've undertaken here in
6 association with this project. A number of them just come out
7 of our general operating experience as a pipeline company.

8 Q Okay, I wonder if I could
9 go back to a point which I felt was made at the Energy Board.

10 I wonder if you would agree with me
11 that the information presented in Volume 5(A) on the impact
12 in the Yukon relating to social problems, such as crime,
13 alcohol abuse, et cetera, is inadequate?

14 A No, I wouldn't agree with
15 that.

16 Q Okay, perhaps then we could
17 go back to that and remake the point. I wonder if you could
18 turn to 5(A) 5.17? Under the chapter on Impact on the Yukon.

19 A Yes, I have that page.

20 Q Okay, if you then would
21 look at the section on crime? I believe it amounts to six
22 lines at the bottom of that page.

23 A Yes.

24 Q Do you feel that that is an
25 adequate outline of the impact related to crime on the Yukon?

26

Littledale, Saker, Ellwood, Burrell, .
Miller
Cr Ex by McPherson

1 A I think that the stage that
2 we're at with this project now, that this is as good an as-
3 sessment of the situation as can be arrived at.

4 Q Are you aware of information
5 that is already available on existing development related to
6 crime statistics?

7 A I'm aware that there is consid-
8 erable information available, generally, on this subject, yes.

9 Q Yet it's not reflected in your
10 chapter on impact to communities.

11 A Well, it's reflected there, through
12 the knowledge of our consultants. I don't think they felt
13 any need to repeat that.

14 Q Okay. One of the questions
15 that was asked of one of the panels at the Energy Board
16 Hearings is the estimated length of time that Foothills was
17 advised that it would take to prepare a more detailed sum-
18 mary of the social impact. Do you remember the
19 answer to that question?

20 A No, I don't.

21 Q Okay. I believe it is in the
22 transcript and the answer was three to six months. Now, that
23 was in March and we're now in May. I wonder if you can tell
24 me-- that, that's been almost three months since those
25 hearings. I wonder if you can tell what additional informa-
26 tion you've obtained since that time on social impact to

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1 communities, related specifically to these areas?

2 MR. MACKIE: Mr. Chairman, before
3 we go and answer that, I believe the answer of three to six
4 months was on the assumption that Foothills was certificated,
5 it would take that long to provide the studies. I believe
6 that's different than Ms McPherson indicated.

7 MS MCPHERSON: I'm sorry, I didn't hear that.

8 MR. MACKIE: The three to six month period
9 that was indicated as required for the studies referred to
10 three to six months after certification.

11 Mr. Ellwood, perhaps you could cor-
12 rect me, that was my understanding.

13 MR. ELLWOOD: I would rather refer
14 to the transcript here. I'm having difficulty recalling
15 exactly what the order of questioning was there. I'd prefer
16 to read the transcript.

17 MS MCPHERSON: I believe it was a present.
18 I was on the panel that was asked that particular question
19 and I do remember that that's the answer that we gave.

20 I'm sorry, to recap then, what was
21 your answer to the question, asking what new additional infor-
22 mation has been done in the social impact area?

23 Q Well, we're not now undertaking
24 any, or we don't now have any new research or work underway.
25 We are contemplating now the need for such and I expect we'll
26 make some decision on that shortly.

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1 Q Okay. I wonder if I may ask
2 you the same question I asked this morning? How would you
3 propose to measure effects on Yukon communities of social
4 impact?

5 A Oh, I would think we would
6 use the statistics that are generally gathered for this.
7 The RCMP gathers crime statistics, you would measure crime
8 be referring to their statistics. Likewise for other matters.

9 Q You wouldn't have any specific
10 program design related to, perhaps the rather unique situa-
11 tion of development, as opposed to just increasing rates?

12 A I'm not sure I understand what
13 you mean.

14 Q I gathered from your answer
15 that you were going to look at the increase generally, across
16 the board in a number of areas. Now, that could be attribu-
17 ted by a lot of different things, could it not? I'm refer-
18 ring to, perhaps, measuring the effect that pipeline construc-
19 tion and development, specifically, is having on communities,
20 not just generally the increase in crime rates and those
21 sorts of things.

22 A Well, it's a difficult task,
23 I would admit. It's very hard to separate, you know, one
24 activity from another. If the pipeline is coming in, there
25 are things such as Mr. Miller has been talking about, let's
26 take inflation. You can't measure pipeline inflation

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1 as such, you have to take a look at the total and try to
2 figure out what part of that would be attributable to this
3 project. There is nil measure of pipeline inflation as
4 opposed to, say, mining inflation.

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1 Q I agree with you that it
2 is an extremely difficult area, one that perhaps would call
3 for a fairly specialized program to be designed, would you
4 agree with that?

5 A Yes, depending on what you
6 wanted to monitor, you may have to have some special sort of
7 data gathering capability to determine that.

8 Q And if it is a fairly
9 specialized program, that would mean then that you would be
10 looking at hiring specialists to do that, would you not?

11 A You would hire the person
12 to do that who was competent to do it. As anything else,
13 whether you need a specialist or not is hard to say without
14 knowing exactly what it is you're trying to measure.

15 Q I wonder why, Mr. Ellwood
16 you have chosen to only direct yourself at the construction
17 phase of the project in your evidence here in Number 3, when
18 you're talking about minimizing social impact. You do
19 identify that the construction phase may be of the greatest
20 concern, but you really don't mention the social impact in
21 preliminary phase, and also on an ongoing basis.

22 A In the preliminary phase
23 I would put in with construction, that's between now and when
24 the pipeline starts operating would be what I consider the
25 construction, part of this. I didn't mention anything
26 specifically about the operation and maintenance, I don't

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1 feel it to be of critical concern. The problems, as we see
2 them, arise during construction.

3 Q Part of my concern about
4 the operation and maintenance goes back to the specialized
5 program that we were talking about in terms of evaluating and
6 monitoring the various types of effects on communities. I
7 think if you're going to look at a very short period of
8 construction, that brings different problems than an ongoing
9 type of development does, I think they are two different things
10 and I'm really wondering why you've isolated just the cons-
11 truction phase.

12 A In our opinion the poten-
13 tial problems arise during or with the construction phase.

14 I was addressing myself to those problems. I don't
15 anticipate that there will be a large problem, social or
16 otherwise, in having an operation and maintenance center in
17 Watson Lake. So I didn't write any evidence about those
18 problems because we don't anticipate them.

19 Q You don't think then that
20 there will be any ongoing social impact?

21 A I'm sure there will, the
22 supply of natural gas is quite an impact on this area, so
23 I expect it will be ongoing.

24 Q You don't think there will
25 be any negative ongoing social impact?

26 A There may well be. It

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1 depends on how successful everybody is in mitigating the
2 impacts during construction.

3 Q Mr. Ellwood, I have
4 one brief question for Mr. Littledale. These pages aren't
5 numbered. So I can't really. Referring to policies and
6 procedures governing the operations of the company with
7 respect to matters such as, and you go on with a list, hiring,
8 salary, etcetera. You "use of intoxicants and treatment of
9 alcoholism" at the of this page. Could you tell me what's
10 involved in the treatment of alcoholism?

11 MR. LITTLEDALE: Yes, we retain company
12 medical facility; doctor, nurse, and by this I don't mean
13 just sort of one doctor, one nurse, we have doctors
14 appointed along the pipeline system as doctors acting on
15 behalf of Westcoast along with their standard practices. And
16 we treat/^{it}as a medical problem, and we deal with this generally
17 as a medical problem, and sometimes we have to use other
18 avenues to deal with it, such as the Church, and local social
19 workers that are familiar with the problem, and we have been,
20 I would say, reasonably successful in approaching it this way.
21 Alcoholism is a universal problem not relegated only to any of the
22 territories or any of the provinces. It appears in many
23 different areas, and if there is any more detail I can give
24 you on it, but that is a general outline of the way we
25 approach it. We generally treat it as a medical problem.

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1 But sometimes, in order to try to resolve, say the problem
2 with an individual, you seek the help of others as well, as
3 I say the Church, social workers, friends, neighbors, and so
4 on. But primarily, it's directed through the medical staff.
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1 Q So then, in essence, what
2 you're saying is that you will be providing the personnel to
3 work in the area of alcohol treatment?

4 A Yes, I think we've said all
5 along that the thread, gist of our testimony here has been
6 we can call on the experience of the two sponsors who have
7 been operating companies for many years and some of them who
8 operate very close, I think relatively close, and certainly
9 in similar territory and similar terrain, to where we're
10 sitting right now. In my evidence I mentioned Fort Nelson.

11 I cannot see why, where our policies
12 have been successful and nobody having come up with any
13 better method of doing it, that we would want to deviate from
14 that.

15 I was about to interrupt, or not
16 interrupt, but to try to add to Mr. Ellwood's testimony on
17 the question of social impact in the O & M phase, and if you
18 wish, though you haven't asked me the question, I could
19 elaborate on that.

20 Q I'd like to pursue the
21 alcoholism question first and then I'd be glad to hear your
22 comments on that.

23 How many personnel do you propose
24 then to provide for the treatment of alcoholism?

25 A I can't honestly tell you
26 at this point in time that I have a number. What would --

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1 what we try to do is when we're providing people in the
2 communities along the interior, first of all we have our
3 doctor, company doctor, who is employed by the Company in
4 Vancouver and we have a nurse in there. He generally directs
5 the overall sort of Company policy in this area.

6 Now, along the communities, say
7 going up the pipeline in Hope and Kamloops and Quesnel and a
8 lot of other smaller communities, right throughout, where
9 there is medical staff, a doctor has a practice, our doctor
10 goes up and he appoints somebody there and he becomes our
11 medical representative in the area. It is through him
12 that we deal with these problems.

13 So, I happen to remember the
14 doctor's name in Fort Nelson is Dr. Kenyon, Dr Kenyon has
15 a practice. He also handles Westcoast's medical problems, along
16 with his associates. He in turn is directed by our Company
17 doctor who handles the overall sort of policy in this matter.

18 Q So, these medical practitioners
19 then, do have a full time practice of their own?

20 A That is correct. The ones
21 up and down the pipeline do have a full time practice of
22 their own.

23 Q Do you have any estimates of
24 the time spent in the treatment of alcoholism spent here in
25 the Yukon?

26 A I personally don't. Mr.

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1 Ellwood may have.

2 Q Do you, Mr. Ellwood?

3 MR. ELLWOOD: No, I haven't. I have
4 no idea of the number of man hours put into alcoholism here.

5 MR. LITTLEDALE: One thing I may add
6 to this. This whole question is a pretty delicate one, you
7 know. Sometimes when we appoint a doctor and, who has a
8 practice, and we happen to have a problem with an individual,
9 we may not use our own Company appointed doctor. We may use
10 the man's doctor. His regular doctor to try to resolve this
11 problem and help the person, the individual out. It is not
12 something that is black and white and cut and dried, and one
13 has to approach it with a great deal of sensitivity.

14 Otherwise, your efforts to try to
15 help a person might be very well counter-productive.

16 Q Yes, I can certainly under-
17 stand that and we certainly have spent a lot of time ourselves
18 looking at the programs in the Yukon for the treatment of
19 alcoholism and I would suggest to you that perhaps those
20 types of figures would be useful to you in looking at the
21 personnel required to treat alcoholism. I think it's maybe
22 a bit unrealistic to think about a full time medical
23 practitioner being able to give the time and set up a program
24 that is required for this type of problem.

25 A Well, I liked your original
26 sort of comment earlier on that you can't just look at

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1 increases and say, well you know, look at it as a matter of
2 statistics. What you're really trying to do is to resolve
3 the problem and cure as many cases as you can in the best way
4 that you can for the individual. Like all things in this
5 particular area, sometimes you succeed and sometimes you
6 fail.

7 The fact that you failed once doesn't
8 mean to say that, you know, this is something that doesn't
9 preclude you trying again. Speaking for Westcoast, I can
10 say that they have dealt with this problem with a great deal
11 of understanding and feeling for the individual and have
12 really stretched their concern and they've sort of not turned
13 their back on the individual and said well, this chap, it's
14 impossible to do anything with him and the only thing we can
15 do is terminate him and then he can become somebody else's
16 problem. We have kept people employed and run into difficulties
17 with the same persons many times and with the same individuals
18 for many years. Some we have been successful with, and some
19 I look at today and I feel very happy about.

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1 Q I hope when you are planning on
2 terminating them, you're planning on taking them back out,
3 not leaving them here.

4 MR. ELLWOOD: Well, that they will be resi-
5 dents here when we hire them...

6 Q Okay. Perhaps if I could
7 clarify then the funds available then will be for treatment
8 of alcoholism on pipeline construction sites only.

9 MR. LITTLEDALE: I have been addres-
10 sing myself, really, more to the O and M phase in this regard.
11 I have not been addressing myself to the construction phase.

12 Q Okay. I think that's a very
13 important distinction to make here then. What is your inten-
14 tion with the construction phase.

15 A I should, perhaps, pass this
16 one to Mr. Burrell, but if he wishes to pass it back to me,
17 I'm willing to handle it.

18 MR. ELLWOOD: During the construction
19 phase of the pipeline, we'll be having a counsellor avail-
20 able in the camp to give what assistance he can in this
21 regard. We are not planning for the construction phase
22 such an in-depth or detailed attempt to overcome these pro-
23 blems as we would in the operations phases, as described by
24 Mr. Littledale. The employees, during construction, of
25 course they are not our employees, they, we are the owner
26 company and the people are employed by contractors and sub-

1 contractors to us. Generally the jobs are very short-term,
2 as any construction job is and there is just perhaps three
3 months where such a person might be in the camp. There is
4 just very little opportunity to undertake the kinds of things
5 that Mr. Littledale was talking about.

Q Yes, I'm aware of that and that's one of the main areas of concern, as well as the fact that it's fine to have a program for an alcoholic, but they have to be motivated and want to go. There's a whole other population of alcohol abuse that is somewhat uncontrollable from the point of view of most interest groups, you know, yourself included. I'm wondering what you have proposed to do with that particular population?

14 A Could you state that again, please,
15 I'm not sure I followed that.

16 Q I think when you're looking at
17 a program for the treatment of alcoholism, as is stated in
18 your policies, you can look at a program for treating alco-
19 holics who recognize they're alcoholics and will go to the
20 counsellor and that's money well-spent, hiring a counsellor
21 to treat people involved in that kind of abuse. There's a
22 whole other population who abuse alcohol and many related
23 social problems, child abuse, family abuse, and the rest of
24 it, who will not make themselves available to a counsellor.
25 What do you propose to do--?

26 A We don't have any specific

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1 plans to deal with that situation. Again, this is a general
2 problem which is, you found it anywhere in the country,
3 you can find it in most countries.

4 Q I realize --

5 A I think we would be, we don't
6 have any misconceptions that we are going to alcoholics for
7 the pipeline project.

8 Q That's not what I was implying --

9 A You can't do that, it's an on-
10 going problem, whether we have a pipeline or not.

11 MR. LITTLEDALE: Perhaps I could
12 mention, on the construction end of it is that, as was men-
13 tioned earlier, these are contracted people for the most
14 part, but one of the problems sort of to talk can-
15 didly, if you have people coming on the job drunk, that
16 poses a severe safety hazard and endangers lives. So, you
17 have to remove those people. Now by removing them, I'm not
18 saying that you have to terminate them, but you have to re-
19 move them until at least they're sober, from what they're
20 doing. Now, most of these people, when you talk about, you
21 talk about the construction workers or construction people
22 are, for the most part, away from their homes. You know,
23 they're working along with the pipeline and so, as for
24 child abuse and sort of getting tanked up and going home and
25 beating up their wives and things, they're away from
26 that scene. They're away from home. Really, the

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1 problem is more in the camp or else creating a problem with-
2 in the community by leaving the camp and somehow getting into
3 the community and doing things that they shouldn't be doing.
4 In these circumstances, you have to pull them off the job.
5 If you find your workers are going in and getting drunk and
6 creating a problem in a community, you can't tolerate this,
7 so you have to remove them.

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1 Q How is that sort of
2 situation going to be monitored -- to what degree of how
3 bad does it have to get?

4 A Well, it's something that
5 has repeated itself year after year as construction has gone
6 on. It does not have to get very bad -- as a matter of fact,
7 as years have progressed in the pipeline construction business,
8 we have been pretty strict ourselves, and it's monitored
9 by Company representatives in the camps, the owner representa-
10 tives, plus the construction supervision.

11 For an example, on a recent
12 construction job a year ago last winter, we had a truck load
13 of, or a bus load of construction workers who came out to
14 a job east of Fort Nelson. When they arrived on the site,
15 they were drunk, and they were not permitted to come to work.
16 And that's how strict it is.

17 If any of the workers were to go into
18 the, and I use Fort Nelson because it's the closest community
19 to here, were to go into the town, get drunk and start fights
20 and misbehavior, they would be, depending on what they did,
21 there would not be, we would not wait for time after time.
22 They would just have to be that occasion and they would be
23 pulled into line very rapidly, or removed from the job.

24 Q Okay, that example, perhaps
25 is the one that would be most obvious to both the Company
26 and communities, where fighting is involved, where brawls are

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1 involved, what about other examples of men who get drunk, go
2 and take fourteen year old girls back with them, or illegitimate
3 children, results of venereal disease, that's a bit different.
4 That's not as noticeable?

5 A Yes, I agree with you, but
6 one of the problems that I think we're facing here is that I
7 think you would have to agree that a company, or an agency,
8 any agency, cannot be all things to all people, at all times.
9 You do have such other agencies, such as police, you know,
10 that have to be involved in such matters as that you are
11 talking about. Certainly if a construction worker suddenly
12 turned up on the site with a young girl, that would not be
13 tolerated for an instance. By us, and I'm speaking by us from
14 my experience with Westcoast. That man would be immediately
15 reported to the local authorities, to the police.

16 Q I guess it's not particularly
17 the bringing back to camp that I'm concerned about, but the
18 problems resulting from going into the communities. I'm
19 wondering what kind of policies -- I recognize that it is a
20 problem, I'm not expecting --

21 A Yes, but I'm saying these
22 kind of problems ma'am, is something that we certainly can't
23 do much about it, unless where we know of it. If we know
24 we have somebody of this type, you know, immediately we know,
25 we do whatever we can to take care of this situation as a
26 Company.

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1 Q You do admit then, that those
2 kinds of situations are quite possible?

3 A They are possible. Now the
4 kinds of situations that you are talking about and this business
5 of sort of taking fourteen year old girls off, I have not
6 really been involved in situations where that has really
7 occurred very much with the construction crews.

8 I'm personally saying that my
9 experience has been one where that hasn't happened very
10 much.

11 Q I guess I would again
12 suggest to you that perhaps Yukon communities may have
13 different social structures than southern towns and that those
14 types of situations may be more vulnerable in the North.

15 A Well, I never regarded
16 Fort Nelson as a southern town. I must tell them this. It'll
17 make them feel good that --

18 Q Okay, perhaps I can leave
19 that.

20 I have several questions for
21 Mr. Miller?

22 MR. GOUDGE: Would you like to break
23 for a coffee now, sir?

24 MR. CHAIRMAN: I wonder if we might
25 just take an abbreviated break of about five minutes at this
26 stage.

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1 PROCEEDINGS RESUMED PURSUANT TO ADJOURNMENT

2 MR. CHAIRMAN: I wonder if we might
3 reconvene now?

4 MR. GOUDGE: Sir, if we could recon-
5 vene the panel now, Ms. McPherson, I think, has a few more
6 questions.

7 MR. CHAIRMAN: Ms. McPherson, when
8 ever you're ready, please.

9 MS MCPHERSON: Yes. Mr. Littledale,
10 perhaps if I can just finish up that area, you have just
11 said that you don't propose to be all things to all people
12 and I can certainly understand that. Does that mean then
13 that the social services and community services of the Yukon
14 will have to pick up the slack where you're not able to
15 provide those types of services?

16 MR. LITTLEDALE: Well, I believe,
17 that there's some services that we just cannot provide.
18 Some that just legally don't fall under our jurisdiction and
19 that, as a corporation, as a company. What I was trying to
20 say and maybe my choice of words wasn't very good, is, maybe
21 still my choice of words won't be very good, but, you know,
22 we just sort of can't be everything to everybody because it's
23 impossible as a corporation to be so, nor can any other one
24 entity. Police can't be everything to everyone, all people
25 that's what I meant, not that I'm saying that we won't sort
26 of provide counsellors and people like that and do what we

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1 can do within the limits of our capability and jurisdiction.

2 We certainly do want to be a good
3 corporate citizen.

4 Q You are prepared then to share
5 in the costs of some of these residual services that will be
6 necessary.

7 A Well, I'm not sure what you
8 mean by residual services. Some services for the, say, the
9 duration of the construction project, it won't be a shared
10 situation, it will be borne entirely by ourselves and others
11 there will be sharing. In some cases we will be sharing
12 through taxation, you know, a number of things you could
13 sort of tell me specifically what I could answer specifically.

14 Q I'm thinking of the areas that
15 social services will have to pick up.

16 A Well, in social services, there
17 are certain areas that we will provide social services our-
18 selves. We intend to provide counsellors ourselves on the
19 camps and we also intend to have forms of social services as
20 we do now within our existing companies/ through our Human Resources
21 Department.

22 Q Could you tell me, just as a
23 matter of interest, how you propose to return an employee
24 who has been let go for any number of reasons? Let's say
25 alcoholism, for instance, back to his point of origin, if he
26 sees that there are, perhaps, other high paying jobs that he

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1 can obtain here? Are you going to bodily put him on the
2 plane and --- ?

3 A Could you ?

4 Q I'm thinking of a person who
5 comes, who you hire to come up here to work on a pipeline---

6 A Yes

7 Q ---Who gets into some trouble
8 with alcohol abuse, maybe fights, whatever, who is let go,
9 who sees, well, there's money that can be made around here,
10 I can go into Whitehorse and, you know, get a good paying
11 job. Are you going to return him to the point where he was
12 hired or are you going to allow him to remain and look for a
13 job somewhere else?

14 A That is a matter, really, that
15 I think we would have to discuss with the authorities as to
16 what jurisdiction we have to sort of bodily remove them from
17 the area ourselves.

18 Q Your policy is, then, that you
19 cannot force someone who has been let go to return to their

20 A It's not our policy, m'am, it's
21 an absolute fact. I don't think anybody can do it. As far
22 as I know, this is a free country and until such time as
23 the authorities are the ones that say, you know, you are
24 persona non grata in this area. I don't know that anywhere
25 in Canada that you can take a company employee and say we
26 will march you to the airport, put you on the plane and we

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1 will handcuff you until you get off in Calgary. You could
2 get into very serious trouble yourself doing that.

3 Q Some of the descriptions, then,
4 of the practices of flying workers in and flying them out,
5 perhaps may have those kinds of difficulties, then, would
6 that be right?

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1 A Well I would say that
2 anything that you do in this area there's liable to be a few
3 problems of this type. I find it difficult to imagine that
4 it would be more than a very, very few of the type that you
5 have just been citing as as an example.

6 Q But, nevertheless, you
7 cannot control whether they stay in the Yukon or they don't.

8 A Absolutely not.

9 Q Okay, that's fine, then
10 you then. Mr. Miller, perhaps we could look at the area
11 that you have examined in the increased cost to welfare. I
12 wonder if you could tell us where you obtained the 7 percent
13 as an increase figure. I'm sorry, it's page 10.

14 MR. MILLER: It's in the Socio-
15 Economic Statement.

16 Q Could you break that down
17 for me, what does that include?

18 A Well, I think what was used
19 they were taking case history related to population, and
20 assuming population growth of a certain factor, would increase
21 or would result in a case load increase of 7 percent.

22 Q Could you break down
23 further what that 7 percent would include, I'm thinking of
24 different types,

25 A No, I couldn't break down
26 I was using the Socio-Economic Statement of Foothills, and I

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1 don't think anybody could break it down, it's based on
2 historical data, which in the welfare field is not a very
3 meaningful thing.

4 Q So this 7 percent then
5 came from Foothills material?

6 A It came from the Socio-
7 Economic Statement.

8 MR. ELLWOOD: Ms McPherson, if I
9 might add something here, that 7 percent figure is in our
10 Socio-Economic Statement and as I recall now, the consultants
11 calculated that number by looking at the population increase,
12 and it wasn't broken down sort of case by case. This is a
13 gross thing based on population trends and statistics that
14 they had from the Welfare Department regarding, I suppose, the
15 number of cases per population for a given year.

16 Q Oh, so this is a 7 percent
17 increase that would be likely to happen regardless.

18 MR. MILLER: No, resulting from popu-
19 lation growth, in other words,

20 Q Yes, the population growth
21 in any given year.

22 A That's right.

23 MR. ELLWOOD: No, this is in excess
24 of what they have predicted for the normal population or no
25 pipeline case.

26

Littledale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Ms. McPherson.

1 Q Okay now. Which is it,
2 we seem to have,

3 A I think I have to correct Merv there,
4 the 7 percent is over and above what they have predicted
5 for the normal population growth of this area. By normal
6 I mean, you know, without the application. This is their
7 base, and they have predicted a 7 percent increase over that
8 resulting from the population increase from pipeline.

9 Q So, the 7 percent is
10 directly attributable to pipeline activity.

11 MR. MILLER: Based on historical factors
12 or statistical means.

13 Q What would the additional percen-
14 tage be, the average annual percentage increase?

15 A Well, as I recall it over
16 the last number of years, it's been decreasing, not increa-
17 sing.

18 Q With regard to, ---

19 A Total case load of welfare
20 or social assistance, if you like.

21 Q I don't have those facts
22 right in front of me but I'm not sure it has been an actual
23 decrease.

24 A Well, I'm going by memory
25 here, but in 1974 total case load was increasing in the nei-
26 neighborhood of about 20 percent, in 75 and 76 there was

Littledale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Ms. McPherson.

1 additional welfare workers hired. Case load again went up
2 and when the staff complement reached its present, or what
3 you might call the optimum level in about 76, the case load
4 had started to decrease.

5 Q You're talking about
6 percentages of increase then?

7 A I'm talking about real
8 case load decrease.

9 Q Okay. That 7 percent then
10 was in addition to what percentage?

11 MR. ELLWOOD: I don't have the base
12 line projection here.

13 Q Okay. Mr. Miller I wonder
14 if you have the forecast of needs, both program needs as well
15 as financial needs for the coming year for the Welfare
16 Department?

17 MR. MILLER: For the 77, 78 fiscal
18 year?

19 Q Right.

20 A I don't have them with me.
21 I did look at them.

22 Q Were they involved in
23 calculating the cost?

24 A What I calculated my cost
25 on was an analysis of where there are social workers presently
26 along the Highway or along the pipeline route. And I have

Littledale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Ms. McPherson.

1 assumed that in certain communities, because there are no
2 social workers, that they will require them. I hear there is
3 no social worker north of Whitehorse on a permanent basis.
4 And I'm suggesting that, for example, there should be at least
5 one social worker required north of Whitehorse on a full-time
6 basis.

7 Q There is no social worker
8 in any community north of Whitehorse?

9 A On the Alaska Highway.

10 Q On the Alaska Highway.

11 A That's right.

12 Q I think it might perhaps
13 have been a helpful thing to have had the program forecast,
14 because the needs are changing within the Department
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Littledale, Saker, Ellwood, Burrell
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1 A I don't disagree that needs
2 change, but are those program needs or are they demand needs?
3 I can relate back a number of years when we had very few
4 social workers in the Yukon, and our case load statistics
5 were very low.

6 As we hired new social workers, the
7 case load statistics went up, so, what I'm really saying is
8 in the Social Welfare field, I'm not saying that there's
9 more problems now, I'm just saying that they weren't
10 discovered before.

11 Q I wonder if you can outline
12 what the three locations might be, and what you would see the
13 increase being?

14 A I have assumed that there
15 should be one social worker during the construction phase
16 at least on the north Highway on a full time basis; I've
17 assumed that there should be one between here and Watson Lake,
18 probably at Teslin; and that there will be additional
19 manpower needs either in Whitehorse, or Watson Lake, and I'm
20 not suggesting full time people in both those places, because
21 they have now have a present staff complement.

22 Q Do these figures reflect
23 the necessary funds in the corrections budget as well? Is
24 this probation officers?

25 A No, this is not probation
26 officers, this is strictly social welfare.

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by McPherson

1 Q Okay, but it's not the
2 total budget which would include part of the corrections?

3 A No, I have not included
4 corrections, because I have assumed that there will be no
5 need for additional staff in the corrections or probations
6 field.

7 Q You're assuming then that
8 there'll be no need for additional staff in gaols?

9 A No, that's right, I have
10 assumed that they won't need additional staff in the gaol.

11 Q Are you familiar with the
12 material pertaining to social service and correctional impact
13 from the Impact Centre in Fairbanks?

14 A Yes, I am.

15 Q And you still feel looking
16 at those comparisons that there will no impact on those
17 facilities?

18 A Yes, that's right. Not
19 sufficient impact to warrant additional staff.

20 Q Could you tell me now what
21 the present capacity of the gaols are?

22 A You're testing my memory,
23 but it seems to me the Whitehorse Correctional Institute is
24 about 70, and the Wolf Creek Juvenile Training Home is about
25 30, I think at maximum.

26 Q You would say then that there

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by McPherson

1 is lots of leeway there, that their facilities would not be
2 strained?

3 A Well, I think in the
4 Correctional Institute, they've been operating at about 35 or
5 40, and it takes the same relative number of staff to look
6 after 35 or 40 as it would a full house, if I could put it
7 that way.

8 Q Well, in essence, then you're
9 saying that there will be no additional costs to correctional
10 services in general?

11 A I don't see any additional
12 costs.

13 Q These figures that you're
14 quoting of the dollars figures are -- there's no allowance
15 in there for inflationary costs that welfare payments will
16 have to be raised?

17 A No, I've assumed that
18 inflation aside, and I've based all my costs on 1976-77 costs
19 because I have no idea what inflation will be any more than
20 anybody else does. I can guess.

21 Q One question on health services.
22 Could you explain how the addition of one public health nurse
23 would help to alleviate any problem situation.

24 A Well, the area that I was
25 concerned with here, was primarily in the field of public
26 health related diseases, such as V.D., et cetera, and it seemed

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by McPherson

1 to me that there is a certain staff complement now, that with
2 the one additional person, working in the various communities,
3 that that should be sufficient, to this project.

4 I'm not saying it will be sufficient
5 from a public health standpoint. I'm saying related to this
6 project.

7 Q It mentions the cost of
8 health care paid by Workmen's Compensation, accidents during
9 construction. What happens to costs assumed off-site, costs
10 related to V.D., costs related to various community medical
11 problems?

12 A Well, those are now
13 covered under the hospitalization or the various programs
14 that Government now operate.

15 Q So, those costs are absorbed
16 by the Yukon Government?

17 A Those costs would be
18 absorbed by Government, yes.

19 Q Do you have any estimate of
20 what those costs would be?

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Miller

Cr Ex by McPherson

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MR. MILLER: That's right, they're

Littledale, Saker, Ellwood, Burrell,
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1 billed back to the province.

2 Q Right. In your section on
3 Education, you have said that during the construction phase,
4 it is anticipated that there will be no impact on the public
5 school system during this period. I wonder if you could
6 tell me what the present capacity of Yukon schools is?

7 A In total? The total capacity
8 of Yukon schools? Off the top of my head, about 6,000.

9 Q Could you break that down into
10 areas in smaller communities where the impact might be felt
11 if it were five or ten?

12 A Well, if we go down the
13 highway from Beaver Creek, Beaver Creek presently has a
14 total of 17 students and they have two classrooms, plus a
15 basement, so they probably have a capacity of about 40 to 50,
16 physical capacity in the school.

17 If we get down to Haines Junction,
18 it's the probably the one under the most pressure, or will
19 be the one under the most pressure. It currently has 108
20 students and they're pretty well at capacity. However, there
21 is a two-room, possible four rooms school there, which is
22 now being used apartments. The Department is investigating
23 whether they're going to turn it back into a school.

24 Q These are trailers, aren't they?

25 A No, these, this is the old
26 school at Haines Junction. The Department is currently

Littledale, Saker, Ellwood, Burrell, .
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1 whether they're going to add to the school, whether they're
2 going to convert the old school back into a school, or
3 whether they're going to add more trailers.

4 Q Yes, I'm aware of that. Would
5 you not say in that instance that any impact would be pushing
6 present facilities?

7 A To a point. It's always pos-
8 sible to add another portable classroom for a short-term
9 impact. The long-term impact in Haines Junction, regardless
10 of whether the pipeline goes or not, is, an addition to the
11 school, because of the Park facility. So, it's a question
12 of whether the impact of a pipeline would force the addition
13 of a school sooner or later.

14 Q I guess I'm concerned, not
15 only with the space for students, but the quality of educa-
16 tion resulting from the student/teacher ratios and that sometimes
17 it's not always possible to provide the optimum ratio.

18 A Well, outside of Whitehorse,
19 the student-teacher ratios are running about, I guess over-
20 all, about 17 to 1 and in some of these communities, it's
21 as low as 6 to 1, so I don't see the problem in the smaller
22 communities. The problem, if any, in pupil-teacher ratios
23 comes in the Whitehorse area and the Government's policy on
24 that is a considerably higher ratio.

25 Q Yes, I'm aware of that.

26 I just have one last question. I

Littledale, Saker, Ellwood, Burrell
Miller
Cr Ex by McPherson

1 wonder why you restricted your cost forecast to the construc-
2 tion phase only?

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Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by McPherson

1 A Well, I didn't restrict it
2 entirely to the construction phase. In certain instances
3 where I've used 1983, that's in the operation phase. Now I
4 haven't gone beyond 1983, because I see 1984 as being similar
5 to 1983, and the only change in 1985 will be in the Income
6 Tax or possible Income Tax that would be paid by Yukon
7 Foothills -- I'm sorry, Foothills (Yukon) Ltd., and it's
8 flow-back, if you like, to the Government.

9 I don't see any additional costs
10 beyond '83, than what are apparent in 1983.

11 Q Thank you, I have no further
12 questions.

13 MR. GOUDGE: Next, sir, would be
14 Mr. Horton for the Government of the Yukon.

15 CROSS-EXAMINATION BY MR. HORTON:

16 MR. HORTON: Okay, I think my first
17 question I'll address to Mr. Saker.

18 I'm wondering sir, if you are able
19 to tell us to what extent existing contractual obligations
20 under existing collective bargaining agreements are going
21 to constrain or restrict the ability of Foothills to implement
22 the employment hiring and training programs or policies which
23 it has described elsewhere as it's intention to implement
24 in the event the pipeline is approved?

25 MR. SAKER: Well, we had no trouble
26 and I'll state an example of this -- when we did the Pointed

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Cr Ex by Horton.

1 Mountain pipeline project for Westcoast, we had native people
2 brought in on a training program and there wasn't any problem
3 at all with the unions involved at that time.

4 I don't anticipate we would have a
5 great deal of problem of trying to get them to accept it on
6 this program either.

7 Q Am I correct in concluding
8 that the employment hiring and training programs or policies
9 that you have been describing, you and other members of your
10 panel have been describing, are the management policy,
11 management proposal, and that you are at least theoretically
12 subject to some degree of restriction or constraint as a
13 result of the collective bargaining process?

14 A Well, we could be
15 restricted, but I don't think we have. I'm not that familiar
16 with the Nortran Program, maybe Mr. Burrell, or Mr. Ellwood
17 could elaborate more.

18 MR. ELLWOOD: If I get the drift
19 of your question, I guess theoretically it could be restricted
20 by what comes out of the collective bargaining process in
21 implementing policies here. We have discussed this with the
22 pipe -- the Canadian Pipeline Advisory Council and they have
23 not indicated any opposition or disfavour with what we are
24 proposing here. It also, in their testimony to Justice
25 Berger in Yellowknife, there in fact, we're endorsing and proposing
26 very much the same thing themselves. We're not anticipating

Littledale, Saker, Ellwood, Burrell,
Miller
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1 any real problems in this because all the parties involved so
2 far seem to be going in the same direction.

3 Q And the negotiation is already
4 going ahead, is it?

5 A Well, the collective agree-
6 ments are signed, they have been signed for years --

7 Q I'm thinking of negotiation
8 of any changes that might have to be made in order to
9 implement the specific employment, hiring and training
10 programs that you have been proposing?

11 A No, those are not in place
12 at this time. As we have indicated in the evidence, we would
13 ask the Pipeline Contractor's Association, after a permit is
14 issued, to negotiate a project agreement ^{or special agreement} to cover this project.

15 Q Is the membership of these
16 four unions predominantly located south of the 60th parallel?

17 A Pardon me?

18 Q Is the membership of these
19 four unions that you have referred to in your testimony this
20 morning, located primarily down south, down in the Provinces?

21 A I would think it would be
22 very close to 100 per cent located down there.

23 MR. BURRELL: I want to add one thing
24 to what Mr. Ellwood has said earlier, and we have discussions
25 with the Canada Manpower and representatives of YTG with
26 respect to a manpower delivery system for Yukoners and the

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1 intent is that this will go forward in discussion with union
2 and contracting people. We had intended to have meetings at
3 this point in time, but because of labour negotiations within
4 the union, between the union and the contractors, they weren't
5 available, but certainly they're very receptive to sitting
6 down and developing this manpower delivery system well in
7 advance of the construction of the project.

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Littledale, Saker, Ellwood, Burrell,
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1 Q On the basis of the past
2 experience of Foothills and it's two parent companies, or its
3 historical experience, if you want to call it that, has
4 there in fact been labour difficulty, negotiating difficulty
5 with the unions in respect of preferential treatment to local
6 labour?

7 MR. LITTLEDALE: I am not aware of
8 any difficulty in this regard. I could only state that, just
9 as a matter of logic or reason, that the only times that I
10 could see, and this is sort of a hypothetical thing I'm
11 conjuring up in my head, and I say it's based on some logic
12 in dealings with the unions, that the only time I could see
13 a problem is if there was a vast number of union membership
14 out of work, would be the only time that I could see such
15 difficulties.

16 When one says, 'look what you're going
17 to require in the Yukon' and what you're going to require in
18 Alberta and British Columbia all in the same time frame, I'd
19 have to say logic would dictate to me there would be no
20 difficulty whatsoever.

21 As I say, it's just merely a sort
22 of hypothetical reasoning on my part and just talking out loud.

23 Q Can I or anybody else draw
24 the inference from what you've been saying that you as
25 management of Foothills do not anticipate difficulty implementing
26 the policies and programs about employment and hiring and

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Horton

1 training that you have suggested insofar as they do give any
2 preferential treatment to Yukon for training programs or
3 employment?

4 A I certainly don't see any.

5 Q Okay, now I want to move on
6 to something else now which hopefully will be quick. Back
7 to the alcoholism and far be it from me to flog the bottle to
8 death, but I do have a couple of questions that I want to
9 ask about it.

10 Have you, Foothills, conducted any
11 studies for the purpose of providing you with some solid
12 data about the demand that the construction phase is going
13 to place on the Territorial Government or any other government
14 or agency to provide treatment services for alcoholism?

15 MP. ELIWOOD: No, we haven't undertaken
16 any studies about what the demand for such services will be
17 here in the Yukon.

18 Q Mr. Littledale, is it the
19 Company policy of Foothills to provide at it's own cost, once
20 you get into the operating and maintenance stage, extensive
21 alcoholism treatment services and facilities?

22 MR. LITTLEDALE: It would provide a similar
23 type of program as I outlined to the lady in the previous
24 cross-examination.

25 Q Q That is a program that you
26 are providing at your own cost; the company's cost?

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Horton

1 A Absolutely.

2 MR. ELLWOOD: I should point out here
3 that, Mr. Littledale, it's really not a policy to provide an
4 extensive one, it's a policy to provide the services as
5 required. We have 189 operating employees here, if there
6 were no alcoholics among them, we wouldn't have a very
7 extensive program for that.

8 Q Now, Mr. Burrell, I think
9 likely for quite a few minutes now, most of the questions
10 are ones which -- well they definitely arise out of your
11 testimony this morning. If you want to pass them on elsewhere,
12 fine, I'm not particular about who it is that answers them.

13 I'd like to refer you to page 4,
14 question 8.

15 Is one of the intended functions of
16 these local community liaison offices to disseminate information
17 about local hiring opportunities, local training opportunities,
18 and to receive applications for employment or training with
19 Foothills?

20 MR. BURRELL: Yes, that's right. I
21 think we would work that out in conjunction with Canada
22 Manpower and so on. It may be a case that Canada Manpower
23 may elect to take that on or we may do it ourselves in
24 conjunction with them, but certainly I can see that as a
25 function of that particular office, yes.

26 Q Is it the intention of

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1 Foothills to get these local offices operating well in
2 advance of construction, the construction phase?

3 A Yes.

4 Q To what extent do you
5 anticipate right now that it would be possible for these
6 local offices to be staffed by local employees, by employees
7 coming from the local area or at least from Yukon?

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Littledale, Saker, Ellwood, Burrell;
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Cr Ex Mr. Horton.

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A We would like, the intent as I say in our evidence that we would intend to hire local people and we would make every effort to place local people in Yukon before we went outside of that particular community.

Q Is there anything about the work functions that are going to be performed by the Company through these offices that would require specialized training not likely to be possessed by persons in the Yukon?

A No, I don't believe there would be.

Q Turn to page 5, my next three or four questions are inspired by particularly by your answer to question 10. Is Foothills at the present time in a position to assure the Inquiry that all requisite govern-
Canadian
ment, whether they be/Federal, Canadian Provincial or United States approvals' licences permits whatever, either have been obtained, or inevitably can be obtained in order to make it possible for this gas swap to occur, of the gas being pulled out of the Yukon and Alberta gas being put in to replace it?

A Certainly, before this gas swap exchange arrangement can work, we would, of course, have to have approval for the project, and that would come in the United States of course from the F.P.C. and in Canada from the

Littledale, Saker, Ellwood, Burrell,
Miller.

Cr Ex by Mr. Horton.

1 National Energy Board. As far a supply of gas is concerned,
2 Pan Alberta Gas Limited have prepared an application for
3 submission to the Energy Resources Conservation Board in
4 Alberta to cover the export from Alberta of gas deemed to be
5 used in the Yukon. My information is that this application
6 will be presented to the Energy Resources Conservation Boards
7 within the next few weeks. We don't anticipate any difficul-
8 ties at all in obtaining the Government of Alberta approval.
9 The volumes that we're looking at are relative to, say what
10 Trans Canada uses, are very small.

11 Q Is there any existing
12 intention that there would be a maximum limit placed on the
13 amount that would be tapped off, if I could use that phrase,
14 here in the Yukon?

15 A I don't see any reason
16 that there would be.

17 Q Now, to page 6, up pages
18 6, 7 and 8, primarily questions 11, 12 and 14. The cost
19 estimating for facilities necessary to provide natural gas
20 to the local communities was done. Did your consultants
21 assume that there would be 100 percent conversion to gas?

22 A No sir. They looked at
23 the present structure of the load, they looked at the in-
24 crease or the new construction in the communities, they
25 looked, for instance, in ^{the} case of Whitehorse, the customers
26 that were presently on electricity, and then they evaluated

Littledale, Saker, Ellwood, Burrell,
Miller.

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1 each of these components to determine, based upon their
2 previous experience, what percentage of that, each component
3 would convert to natural gas, and over what time span. For
4 instance, the electrical customers, they assumed, would not
5 convert.

6 Q They assumed there would
7 be no percentage of conversion.

8 A That's the assumption that
9 was made, yes.

10 Q You're talking about,--

11 A Space heating.

12 Q Domestic use.

13 A Yes.

14 Q What about industrial/
15 commercial use? The conversion from electrical to gas?

16 A No. The assumption that
17 they made at this time was that users that were using elec-
18 tricity for space heating, whether it be residential or
19 commercial, would continue to remain on electricity for that
20 purpose.

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Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Barton

1 Q Are you able to say what
2 per centage of conversion was used as the basis of arriving
3 at the cost estimates?

4 A Yes, I think in our, well
5 I know, that in our application, in ^{the} social economic statement,
6 the section dealing with gas gives a percentage, assumed per-
7 centage conversion for two years, 1986, I believe is one,
8 and 1981, the percentage overall that was assumed for
9 conversion, and then within the work papers are shown the
10 conversion within each component area that we referred to
11 earlier and the time span in which that would occur.

12 Q Is there a minimum per-
13 centage of conversion that would be necessary in any particular
14 community?

15 A Yes, there would be and that
16 would really depend upon the people in the community
17 themselves. Naturally as the, the higher the conversion rate,
18 the cheaper, the lower the cost is going to be for the
19 distribution of the gas in a community. On the other end
20 of the scale if only a few people desired to convert to
21 natural gas, the cost of installing, operating and owning
22 the distribution facilities may be such that it would make
23 the price of gas non-competitive with alternative fuel
24 sources.

25 That's something that to really
26 determine what that point would be is, as I mentioned in the

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Horton

1 evidence, something that would have to be looked at in the
2 detailed study that would be required.

3 Q What communities were
4 studied as potential communities to be serviced by natural gas?

5 A Well, we've looked at, in
6 our report, we dealt with Beaver Creek, Destruction Bay,
7 Haines Junction, Whitehorse, Teslin, and Watson Lake, and we
8 have also had a look at Burwash Landing too.

9 Q Are you, is Foothills, at
10 the present time subject to any contractual arrangements
11 with other companies that would restrict in the future, the
12 freedom of choice of distributor for tapping the gas off
13 the main line and distributing it in a community?

14 A No, that, it isn't within
15 our jurisdiction to make that decision.

16 Q Was any detailed, I suppose
17 you could call it impact study done, with a view to ascertain-
18 ing what the consequences would be to the present suppliers of
19 the present energy sources in the event conversion to gas
20 took place.

21 A No, we have not done that.

22 Q So then there's really no
23 study that's been done by you that would provide us with
24 some information about the cost off-setting, the cost to
25 others, the adverse affect on others resulting from a
26 conversion to gas?

Littledale, Saker, Ellwood, Burrell,
Miller
Cr Ex by Horton

1 A No, the purpose of this
2 study was to get a preliminary indication of what the
3 relative cost of using natural gas would be to fuel oil and
4 electricity, but we did not go beyond that to determine
5 what the impact might be on suppliers of other energy
6 sources.

7 This is, as I say, a fairly
8 preliminary study, it's really difficult at this point in
9 time to know how many people would decide to use natural gas
10 or convert to natural gas and that is the information that
11 you need in order to properly evaluate the affect on the
12 other energy suppliers.

13 Q When is it ever going to
14 be possible to have that information?

15 A Pardon?

16 Q When is it ever going to
17 be possible to have that information?

18 A Well, we could --

19 Q Of how many people are
20 going to convert?

21 A Well, that information with
22 respect to how many people would convert would be determined
23 in the initial stages through this detailed study which would
24 be undertaken following the receipt of the permits necessary
25 to move forward the project.

26

1 MR. CHAIRMAN: Mr. Horton, I
2 wonder if I might intervene here. Would this be an
3 inconvenient point at which to adjourn?

4 It has been indicated to me that
5 some people here have other responsibilities this evening
6 and they would welcome us not running not too much past our
7 advertised adjournment time, and we're not quite a bit past it.

8 Did you want to end this line of
9 questioning in a question or two, or--

10 MR. HORTON: No, I don't mind
11 cutting off right now, sir. I can cut-off right now.

12 MR. CHAIRMAN: I suggest we do
13 that. It has also been proposed that we start tomorrow at
14 9:30. I don't know, Mr. Goudge, if you've had an opportunity
15 to ask whether that causes problems for anyone present, so
16 let me ask that now, for Counsel, or anyone else?

17 MR. MACKIE: Certainly no problem for
18 us.

19 MR. CHAIRMAN: All right, we'll
20 reconvene at 9:30. Mr. Goudge, is there anything else that
21 should be mentioned before we adjourn?

22 MR. GOUDGE: The one other thing
23 I would like to mention, sir, is that we ^{now} have available in
24 the Inquiry offices, copies of the evidences that will be
25 presented by Mr. Templeton and his group on Monday.

26 So, participants can pick that up

1 at their convenience.

2 MR. HORTON: Just

3 before adjourning I would like to mention that,
4 recognize that there is a hockey game tonight. I fully
5 appreciate the fact that the affairs of the nation grind
6 to a halt so we can go watch it.

7 MR. CHAIRMAN: There is the further competition
8 of the environmental assessment review panel, Mr. Horton.

9 We will adjourn until 9:30 in the
10 morning.

11 PROCEEDINGS ADJOURNED
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